

# THE AMERICAN Railroad Journal.

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SECOND QUARTO SERIES.—VOL. XXXVIII., No. 35.]

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[WHOLE No. 2,420.—VOL. L.

## ORGANIZATION.

THE following have been elected directors of the Brooklyn, Flatbush and Coney Island Railroad Company: Henry C. Murphy, William Marshall, Stephen H. Herriman, Charles Storrs, William C. Kingsley, Daniel Chauncey, James Jourdan, E. L. Garvin, Albert Daggett, George I. Murphy, B. F. Tracy, Robinson Gill, and H. D. Polhemus.

A CIRCULAR was issued from the office of the Missouri Pacific Railroad Company, at St. Louis on the 4th inst., announcing that the office of general manager will be discontinued on September 11; that H. M. Hoxie is elected third vice-president and will assume charge of the traffic and land departments, and that A. A. Talmage, late general manager, is appointed general transportation manager.

At the annual meeting of the stockholders of the Harrisburg, Lancaster, Mount Joy and Portsmouth Railroad Company held on the 1st inst., at the Pennsylvania Railroad Office, the following directors were elected: Edmund Smith, George B. Roberts, Wistar Morris, John M. Kennedy, N. Parker Shortridge, James Young, Lewis Elkin, A. J. Cassatt, John P. Green.

At the annual meeting of the Newport and Wickford Railroad and Steamboat Company, held at Newport, Rhode Island, on the 4th inst., the following officers were elected: President, George M. Miller of New York; secretary, Anthony S. Sherman of Newport; directors, John S. Weaver, George M. Miller, J. N. A. Griswold and George Peabody Wetmore of New York; S. H. Vaughan of Wickford, N. F. A dividend of three per cent was declared.

At the annual election of the Albany and Susquehanna Railroad Company, at Albany on the 5th inst., the following directors were chosen: Thomas Dickson, of Scranton, Pa.; Col. F. Young, Honesdale, Pa.; Henry Smith and W. L. M. Phelps, Albany; Minard Harder, Cobleskill; John Westover, Richmondville; J. Pierpont Morgan, Charles Tracey, Robert M. Olyphant, James R. Taylor and David Dows, New York; James Roosevelt, Hyde Park, and Henry M. Olmsted, Morristown, N. J. Col. F. Young was elected president, and William L. M. Phelps, secretary and treasurer.

At the annual meeting of the stockholders of the Baltimore, Cincinnati and Western Railroad Company, held in this city on the 3d inst., the following were elected directors: William

J. Best, Daniel J. Sprague and Henry S. Turbell, of New York; Thomas L. Young and Geo. F. Steadman, of Cincinnati; Jackson Holland, of Baltimore; and Charles P. Janney, of Leesburg, Virginia. The officers, elected on the 5th inst., are: President, Wm. J. Best, of New York; first vice-president, Thomas L. Young, of Cincinnati, Ohio; second vice-president, Jackson Holland, of Baltimore, Md.; treasurer, Henry S. Turbell, of New York; secretary, E. D. McConky, of New York; and executive committee, Daniel J. Sprague and Henry S. Turbell, of New York, and Charles P. Janney, of Leesburg, Virginia.

## CONSTRUCTION.

THE railroad from Jacksonville, Fla., to St. Augustine will be finished in December.

THE thirty miles of the Conca Railroad between Buena Ventura and Cordoba have been opened for traffic.

TRACK-LAYING has been commenced on the Chattahoochee extension of the Savannah, Florida and Western Railway.

THE California Southern Railroad between Colton and San Diego has been completed. The new line is 127 miles in length.

It is expected that the Delaware, Lackawanna and Western Railway will be completed to the International Bridge by the 1st of October.

THE opening of the Wheeling and Lake Erie Railroad for traffic was celebrated on the 23d ult., by an excursion from Toledo to Marietta.

THE New Orleans Pacific Railroad has been completed, and trains will be put on between New Orleans and Marshall, Texas, by the 15th inst.

WORK has been begun on the new telegraph line which is to connect the Baltimore and Ohio line with Alexandria, Richmond and the South.

THE extension of the Ohio Central Railroad from its present southern terminus to Point Pleasant, on the Ohio River, a distance of 44 miles, will be opened early in November.

It is expected that trains will be running between Jersey Shore and Williamsport on the Shamokin, Sunbury and Lewisburg Railroad by the 1st of November.

THE Cincinnati and Eastern Railroad Company have contracted for a sufficient quantity of 56lb. steel rails to complete their road from Newport to Portsmouth, Ohio.

THE St. Joseph, Kansas City and Arkansas Railway Company has been organized to build a narrow-gauge road from Joplin, Mo., south to Van Buren, Ark., about 150 miles.

THE railroad from Newport News to Old Point is nearly completed, and it is expected that trains will be running on the Hampton branch in a few days.

THE contractors for the Selkirk branch of the Canadian Pacific Railway commenced grading on the 4th inst. They will operate from both ends of the line, and expect to have the work completed this fall.

THE Cincinnati, Wabash and Michigan Railroad was finished to Berrien Center, on the 1st inst. It is expected to have it completed to Benton Harbor, its final terminus, in about six weeks.

THE Danville, Olney and Ohio River Railroad Company celebrated the completion of the northern division of their road from Danville to Olney, by running an excursion train over their road on the 23d ult.

THE surveyors of the proposed extension of the Scioto Valley and Chesapeake and Ohio Railroad, running their line from Columbus to Fort Wayne the third time, reached Columbus, Ohio, on the 4th inst. They are locating this time.

THE Denver, South Park and Pacific division of the Union Pacific Railway has just been completed to Gunnison, and the first passenger train ran through from Gunnison to Denver on the 5th inst., carrying 270 persons to the Mining Exposition.

ARDAUGH, BANNERMAN & Co. have accepted the contract awarded to them by the directors of the Kingston and Pembroke Railway Company, to grade the track from the Madawaska to Renfrew, and have it finished by the 1st of September, 1883.

THE completion of the Wabash, St. Louis and Pacific Railroad to Des Moines on the 30th of August, gives it an air line almost from Des Moines to St. Louis; also a direct through line to the East. The connection at Des Moines unites the Northwestern branches with the main line.

THE surveys for the Essex Center cut-off have been completed. The engineer reports the line to be nearly straight, and the greatest grade only 5 feet in the mile, except the approach to the river, where there will be a cut twenty feet deep, but the grade there will not be as

sharp as it is at Amherstburg. This cut-off is 15½ miles long, and will probably be built as rapidly as any road of the same length ever was built.

BROWN, HOWARD & Co., the contractors for the New York, Chicago and St. Louis Railroad, have formally announced the completion of their contract. The road has been finished between Chicago and Buffalo, and turned over to the railroad company, which has also announced the fact that they have taken formal possession of the property.

Work has been commenced on the White River branch of the St. Louis, Iron Mountain and Southern Railway. This road is projected to run from Shiloh Junction, on the main line, to Eureka Springs, a distance of 160 miles. When completed this branch will traverse the northern counties of Arkansas and open up a section of country at present entirely destitute of railway facilities.

WITHIN the year ending August 31, 1882, there have been completed in Texas 1,641 miles of railroad, at an estimated cost for construction and equipment of \$44,525,000. The State has now 5,908 miles of completed railroads, the cost of equipment and building being placed at \$165,806,600. The amount paid out by the roads during the year for repairing, building engines and cars, and for salaries, approximates \$10,282,434.

THE cut-off line from Calvert to Tecumseh, Nebraska, which connects the Chicago and the Atchison systems of the Chicago, Burlington and Quincy road, has been completed. The line is thirty miles long. The contracts will soon be let for extending it from Tecumseh westward to the main line leading to Denver. These links will straighten and shorten the route of the Burlington road between the Missouri River and Denver.

ALL the extra work that will be done on the Pennsylvania Railroad this year is nearly finished. The four tracks now extend from Philadelphia on the main line as far as Villanova, a little more than 12 miles, but all the grading and bridge work necessary for their extension as far as Eagle is done. At Wayne the track on the line is being laid as fast as possible, and within a month the old road running close to Wayne station will be abandoned, and a curve about 1,000 feet in length will be taken out.

THE New York, Chicago and St. Louis Railroad extends from Chicago, Ill., to Buffalo, N. Y., by way of Fort Wayne, Ind., and is 521.89 miles in length, with the standard gauge of 4 feet 8½ inches. The rails are 60-pound steel. The company was organized about a year and a half ago. Its total stock and bond capital is \$29,000,000. It is proposed to put on the finest limited train that has ever run between the East and West. It will be composed entirely of Pullman palace cars of the very finest make. They are now being built in the Pullman shops. The road will be opened for business on the 1st of October.

THE Texas and St. Louis Narrow-gauge Railroad has been completed to a point 40 miles beyond Waco. The road is in running operation from Pine Bluff to Camden, Ark., and from

Clarendon, on White River, to a point 30 miles north of Brinkley, at which latter place it intersects the Memphis and Little Rock Railroad. The line from Bird's Point, Mo., to Jonesboro, Ark., has been finished a distance of 125 miles, making, all told, a total mileage of 572 miles in running operation, and track-laying is going on at the rate of 50 or 60 miles per month. The whole of the grading in Arkansas will be done by October 1. Three hundred men are at work at Bird's Point on the incline and yards, which are to be finished by September 15.

GEORGE T. ANTHONY, the general superintendent of the Chihuahua division of the Mexican Central Railway, announces that it had been decided to open the Mexican Central Railroad to Chihuahua on the 16th inst., with great festivities, lasting eight days. The Mayor and City Council of Chihuahua have raised a subscription fund of about \$20,000 already, and the scheme has been indorsed by Governor Terragas. This division of the road is 224.7 miles in length, extending from Chihuahua to Paso del Norte, opposite El Paso, Texas, where connection is made with the Atchison, Topeka and Santa Fe, the Southern Pacific, the Texas and Pacific, and the El Paso division of the Galveston, Harrisburg and San Antonio Railroad. The length of the main line, from Mexico to Queretaro, is 152.8 miles, and the Tampico division, from Tampico to San Luis Potosi, 262 miles—the latter now under construction.

THE turning of the first sod of the Murray Canal was formally celebrated on the 31st ult., at a point on the line of the canal about half a mile from its western terminus. The contract for its construction has been awarded to Silcox & Mawry. The canal, commencing at a point known as "Twelve O'clock Point," on the shore of the Bay of Quinte, will be constructed in almost a straight line to Weese's Creek, which empties into Presque Isle harbor. The entire length will be a fraction over 5 miles, the width 8 feet at the bottom and 150 at the top, and the depth 20 feet. The object of the canal is to connect the head waters of the Bay of Quinte with Lake Ontario, and thus insure a perfectly safe passage for all the shipping going from the West to Kingston and Montreal, which, instead of going down Lake Ontario to the St. Lawrence as formerly, will pass through the canal and down the Bay of Quinte, thus avoiding the dangerous storms which so frequently occur on Lake Ontario. Work was commenced immediately after the conclusion of the ceremony of turning the first sod.

MR. KNIGHT, inspector of the New York and New England Railroad, gives the following high commendation in his report in relation to the McLeod Air Railroad Signals: "Experiment has already shown that with the pipe now in use (5-16 in. pipe), the signal using 1,800 feet is set in motion in three seconds. \* \* The general adaptation of the parts to their function in the construction of the mechanism seems excellent. \* \* For the railroad of one or two tracks this signal promises all that is to be desired, and when all completed I should be very much surprised if, upon prolonged trial—the best of test, especially of durability—any defect should be discovered, which could not be readily remedied, and thereafter guarded against."

### Telegraphing the Precise Time.

FOR a long time the firm of M. S. Smith & Co. and the Michigan Central Railroad Company have been in the habit of obtaining the time to regulate their clocks by from the observatory at Ann Arbor. Twice a week the regulating was done, an operator going from Jackson to Ann Arbor. But telegraphing by hand was likely to result in slight errors, and the method was not the most satisfactory. M. A. T. Hill, of the firm of M. S. Smith & Co., has invented and perfected a device for telegraphing to any given point the precise time. A large clock of the usual kind will be placed in the observatory at Ann Arbor and astronomically regulated. Connected with this is a secondary clock, which will run two minutes each day, beginning at 11:59 A. M. and stopped at 12:01 P. M. When it begins to run it automatically operates a telegraphic sounder, which for the first minute strikes once a second, and at precisely noon begins a peculiar and unmistakable double "click-click," continuing for one minute. Now the Michigan Central Railroad Company furnish the use of a wire to Detroit, for the sake of getting accurate time. At A. M. Smith & Co.'s store a sounding bell will be rung, the one stroke per second for the first minute calling attention to the fact that it is nearly noon. All watches can be pulled out and set at 12 o'clock, and when the double stroke begins, the owners of the time-pieces know that it is 12 o'clock. The Board of Trade, engine houses, and City Hall will be connected with the circuit. The device is very complete in its minute details. For instance, if the secondary clock should be out of order and stop, at the end of three minutes the large clock "switches the line out," so that the wire can again be used for telegraphic purposes.

### Horse-Shoeing in Ancient Times.

HISTORIANS assert that the practice of shoeing horses was introduced into England by William the Conqueror, who instituted an office for the inspection of the farriers, and gave the city of Northampton as a fief, to the person who held that office. Henry de Ferrers, ancestor of the famous Earl of Derby, and whose descendants still bear in their arms six horseshoes, received his title, probably, from having been inspector, the horses evidently being shod with iron (the French *fer*). The custom of covering the feet of their horses was known to the ancient Greeks and Romans. In scenes of great magnificence, princes sometimes had their horses and mules shod with silver and gold. The mules of Nero were shod with silver, those of Poppæa, his wife, with gold, and when the Marquis of Bonifazio, of Tuscany, went to meet Beatrix, his bride, about the year 1038, so magnificent were the decorations of his equipage, that the horses were shod with silver, the nails were of the same metal, and if any dropped out, they belonged to those who found them. Post-horses were shod sometimes in the ninth century, but few of any other description. Horseshoes have been found in the graves of some of the old Germans and Vandals in the northern countries, but the antiquity of them cannot be ascertained.



## Journal of Railroad Law.

CAMDEN AND ATLANTIC RAILROAD CO.  
vs. HOOSEY.

SUPREME COURT OF PENNSYLVANIA.

## CONTRIBUTORY NEGLIGENCE.

A party who takes an exposed position on a train in motion, by his choice and not from necessity caused by any act of the company, is guilty of contributory negligence, and cannot recover in damages for an accident resulting from such exposed position.

Gordon and Trunkley, JJ. dissent.

Error to the Court of Common Pleas No. 1 of Philadelphia county.

Opinion by STERRETT, J. February 20, 1882.

The single breach of duty with which the defendant below was specifically charged, as the only ground of liability to the plaintiff for the injury he sustained in falling off the platform of the car on which he was then standing, was the failure of the company to provide a sufficient number of cars to seat all the passengers on the train.

Without assenting to the broad proposition contended for, that a railroad company, using steam motive power, is bound absolutely and under all circumstances to provide every passenger on the train with a seat, it cannot be questioned that, as a general rule and under ordinary circumstances, it is the duty of such company to provide suitable car accommodations and seats for those whom it undertakes to carry; and, if a passenger, exercising reasonable care and prudence, is injured in consequence of the company's neglect of duty in that regard, the latter is liable to respond in damages, for the injury thus occasioned solely by its own negligence. There appears to be nothing in the circumstances in this case to exempt the company from that general rule of duty; and if its negligence was the proximate cause of the plaintiff's injury, the liability of the company would necessarily follow, unless the plaintiff himself was guilty of negligence which contributed thereto. His contention was, that, in common with many other passengers, he was unable to procure a seat, and while searching for one he was thrown from the platform of one of the cars, and thus sustained the serious injury which resulted in the loss of his arm. The overcrowded condition of all the cars composing the train, and the consequent inability of the plaintiff and others to procure seats, were facts clearly proven. Assuming for the present that the company was justly chargeable with negligence resulting in injury to the plaintiff below, and that under the circumstances he was not guilty of contributory negligence in passing from car to car in search of a seat while the train was in rapid motion, can it be pretended that it would not be gross negligence in him to voluntarily take a position near the outer edge of the platform and remain there until by an ordinary jolt of the car he lost his equilibrium and was thrown off? This is precisely what the evidence as to the plaintiff's position at the time of the accident clearly establishes. Apart from his own testimony there is very little evidence tending to show precisely where he was at and shortly before that time; and there is certainly nothing that militates against his own

version of what then and there occurred. He testified in substance that on entering the cars at Atlantic City and finding the rear cars overcrowded he pushed his way forward, searching in vain for a seat, until he reached the front car. After remaining there a short time he started back, and, quoting from his own testimony as found in the bill of exceptions, he says: "I left that car because I was tired standing there; had been there seven or eight minutes; started back through the cars; went through some ten or twelve cars; stopped several times going through; can't recollect time it took to go through back; could not get through for crowd; it was pretty near the same going back as coming through; I stopped outside on platform; rear platform of fourth or fifth car, right outside the door; stood on one side; the right hand side coming up. When I got out first I had hold of a little rail or something across the window; I held on to the little rail across the window to keep from falling off; let go to go through the cars; I was standing there a minute or two or so; it was two minutes to the best of my knowledge; can't tell if it was longer; when I left I started to go through, when the car gave a jolt, and somebody struck me. Could not count how many passengers passed through while I was on the platform; they were coming in the opposite direction, up toward the engine, and some were going through the same way, toward the rear of the train; can't say whether the car door of the car I passed out of was open; when I went out the door of the opposite car I am positive sure was open; saw parties coming from the opposite car; I did not stand aside inside of car because I could not see them well, and because I wanted to go through myself; I came out and stood with my back against the car, and my hand behind me; people were passing through into the car I left; there was a crowd; I left that car to go into an adjoining car; while standing there the car got a jolt, and somebody behind me staggered me, the jolt and it had something to do with it; can't tell whether the jolt without the other would have thrown me off; as soon as I got the jolt I made a grab with the right hand, and missed, and caught with the left the rail on the platform; there is a similar rail on the body of the car, to assist people in and off; I tried to get hold of the rail on the body; I was thrown partly round, and caught the dasher rail with my left hand; I was thrown with my chest towards the inside track; train was traveling very rapidly; my arm was mangled."

It is very evident from plaintiff's own statement, that at the time of the accident and for some minutes before, he was not in the act of passing from one car to another in search of a seat; on the contrary, he was standing quite near the edge of the platform with his back to the end window of the car. He was not only in a position of known danger, but was there voluntarily and in disregard of the rules of the company. There is nothing in the testimony from which a jury would be justified in coming to any other conclusion. While he was thus standing on the platform, persons passed from one car to the other in both directions, and there is nothing whatever to show that he could not have gone into the next car if he had been

so disposed. Neither he nor any other witness pretends to say that it was necessary for him to stop and stand on the platform.

In the seventh point of the defendant below, the court was requested to charge. "That even if a search for a seat was the real purpose of the plaintiff in going out on the platform, and even if it were not negligence for him to have crossed from car to car for that purpose, yet, if the jury believe from the evidence that he lingered on the platform, instead of immediately crossing, the verdict should be for the defendant." The learned Judge, in affirming this proposition, added the qualifying words, "unless compelled thereto by circumstances." The jury was thus authorized to inquire whether or not the plaintiff was compelled by circumstances to linger on the platform. We see nothing in the testimony to warrant the submission of this inquiry to the jury. As already intimated, there was not a particle of testimony from which it could be reasonably inferred that plaintiff was compelled to take or retain the position he did on the platform. Having shown by his own testimony that at the critical juncture he was in a position where no one of ordinary prudence should have placed himself, it was incumbent on him to prove that he was there from necessity and not from choice. While the latter was clearly shown, there was no testimony to prove the former. The point should have been affirmed without the qualification complained of. But, for reasons already suggested, we think the court should have gone further, and instructed the jury as requested in defendant's ninth point, which was: "That the evidence shows negligence on the part of plaintiff which contributed to produce the injury complained of, and therefore he cannot recover."

The dangerous position on the platform in which the plaintiff voluntarily placed himself, while the cars were in rapid motion, was undoubtedly the immediate cause of his being jolted off. If there had been any testimony from which it could have been reasonably inferred that he was there from necessity and not from choice, it would have been a question for the jury; but in the absence of such evidence it was error to refuse the point, and leave it to the jury to determine whether he was or was not guilty of contributory negligence.

Of all the passengers on a long train of twenty overcrowded cars the plaintiff was the only one who appears to have been injured. If he had submitted, as many others did, to the inconvenience of standing inside the cars, or if he had been guilty of no greater imprudence than passing from car to car, while the train was in rapid motion, it is not at all probable he would have been injured. His much to be regretted misfortune was the result of his own carelessness. This was clearly proved by uncontroverted testimony, from which no other conclusion could reasonably be drawn.

Judgment reversed.

H. B. Freeman and George M. Dallas, Esqs., for plaintiff in error.

John H. Fox, Edward A. Anderson, and Francis E. Brenster, Esqs., for defendant in error.

THE sale of intoxicants has been forbidden in all restaurants of the Grand Trunk Railway.

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## REFORM IN PASSENGER CAR ACCOMMODATIONS.

THE early railroad passenger cars were made uniformly alike as to class; that is to say, there were no 1st, 2d, 3d, or even 4th class in the same train, or on the same line of road. This latter distinction strikes an American abroad as being amusingly absurd, based as it is, on social caste. The lapse of time has, however, shown the necessity of a classification of our cars, not according to social rank, nor to the upholstering of the seats, nor yet according to the wealth of the passenger, but according to the length of the journey—the “through” cars passing over several roads being appropriately devoted to that travel and therefore having a preference. The “Parlor” cars, like the “Sleeping” cars, have won their way to a permanent utility. This, however, is not so much because they are fitted and arranged like a “Parlor,” or the more pretentious title “Drawing-room,” as because they are usually allotted to a special service, running between given points, which is not the case with the ordinary coach. In other cases where a traveler is accompanied by ladies, or for parties in delicate health, they have special recommendations. Our car builders have, however, been too much misled by the names which have been attached to these special coaches; and have devoted too much attention and expense to mirrors, gilding, veneering and the like, rather than to comfort and economy.

There is room for reform in these particulars in both the Sleeping and Parlor cars of both the Pullman and Wagner variety. What is wanted is a car with less ornamentation, upholstery, chandelier, mirror and gilding, and more practical ease, and which can be furnished to through passengers at about half the present charge. In regard to Sleeping cars it is quite feasible to do away with the luxuriance of carved walnut and massive walls and seats, and substitute for them a car of equal capacity, convenience and comfort. Instead of the present stuffy cushions, a woven wire seat could be devised which could be easily converted into the best of mattresses; and a hair instead of feather pillow. A good bed, on the lower tier, ought to be afforded for one dollar, and in the upper tier for seventy-five cents, which concession would do away with part of the prejudice against the latter. The Pacific railroads, we are informed, are building emigrant cars which have seats convertible into sleeping-berths, for which no extra charge is made, the traveler furnishing his own top mattress, if he desires. It is perfectly practicable to produce a Sleeping car of equal seating capac-

ity and convenience with the standard Pullman or Wagner, having only two-thirds the weight (an important item to the railroad companies) for one-half the cost, and which would earn more money for both the car owner and transporter. Too much of the present outlay is for pleasing the eye; but it is not necessary to a man of business that his journey should be made in a room ornamented like a bed chamber of an European potentate.

The Baltimore and Ohio, the Delaware, Lackawanna and Western, and some other companies are now using handsome sleeping and parlor cars of their own make; and to them rather than to the Pullman and Wagner companies must the traveling public look, we imagine, for reform in this service. If such of these companies as expect to compete earnestly for passenger travel will instruct their master car builders to design and produce a day and night car which will earn a fair interest on its cost by charging one-half of the present tariff, the result will be seen at once in a diversion of business. The Wagner "Chair car"—for that is the proper designation—is a notorious tax on the endurance, and on the pocket; since it is part of the Vanderbilt policy to drive travelers into it, by making the ordinary first-class cars as uninviting as possible, and by getting for the Wagner car service far more than it is worth. On some of the Western roads are very comfortable "Chair cars," which can be had for fifty cents for a day's travel, of say 12 hours; but what is needed is a car with about the same capacity and finish as the regular Springfield or Wilmington day car, with the seats differently arranged so as to permit greater freedom, for the service of which say one dollar, or ten cents per hour, would be ample. This, as before explained, would not be an intermediate social rank; but simply for greater seclusion, for the certainty of a seat, and for cars passing over more than one road. The genius that can devise such a car will go far to drive out of use the heavy and too highly ornamental, but not altogether cleanly, Sleeping and Palace cars.

It has been suggested to us that some thoughtful railroad superintendent might with advantage take the subject of plush car seats under consideration. The worsted car plush, now in general use on American railroads, seems to have been adopted for seat coverings more out of regard to its appearance to the eye than from its comfort to the traveler. It is hot and stuffy in summer, it harbors dirt, and even vermin, at all seasons, it is liable to be spoiled in appearance by chance cinders, and it is very expensive. This, however, is not its greatest objection. Whoever has ridden on the regulation car seat for several hours together will have



noticed the disposition to slide forward on the seat unless braced by the feet. The plush nap slides from under him, as it were, and from a medical point of view, is promotive of irritation and inflammation of the scrotum and adjacent organs. Inquiry will elicit great uniformity as to this tendency. Leather is too expensive and too cold in winter; rattan is too cool, perhaps, in winter. Mr. Pullman might make another step ahead in this direction, as his car seats are said to be notorious offenders in this particular.

### Rapid Railway Construction.

THE *St. James Gazette* discusses Sir Garnet Wolseley's chances of quickly constructing a line of railway from the canal wharves at Ismailia to join the existing railway at Zagazig, a distance of forty-eight miles. From Zagazig to the junction with the railway from Alexandria to Cairo at Benha-el-Asi, on the right bank of the Damietta branch of the Nile, near the railway bridge over that stream, is twenty-four miles; and from Benha-el-Asi the distance to Cairo is thirty miles, for the greater part of which the line of railway is perfectly straight. The whole length of railway existing in Egypt at the date of the publication of the "*Mémoires sur les Principaux Travaux en Egypte*," by M. de Bellefond, was 220 miles, of which ninety were on the now disused route from Cairo to Suez.

It may be of some interest to know what are the greatest *tour de force* that have hitherto been effected by engineers, whether civil or military, in the rapid construction of railways where the nature of the ground has been such as not to demand much labor for its levelling previous to laying the rails. The instances in which—as shown by the Minutes of Proceedings of the Institution of Civil Engineers—the most rapid work has been effected in the construction of permanent way, are those of the railway across the Grandes Landes from Bordeaux to Bayonne, laid by Mr. Conder for the *Compagnie du Chemin de Fer du Midi*, in 1855; and that on the Candahar Railway, under the direction of the Engineer-in-Chief of the Indus Valley Railway, in 1879.

In the first case the rails and fittings for sixty-eight miles of railway were delivered at Bordeaux, and the timber was supplied at four intermediate stations on the line of railway. From the 20th of March to the 20th of July the progress on the works was slow, as the materials were very slowly delivered by the company. But the Emperor of the French, having expressed a wish that the line should be opened by the end of August, to allow of the conveyance over it of the Empress to Biarritz, Mr. Conder undertook, on the 20th of July, that a length of twenty-eight kilometres should be laid by the 31st of August. On the 5th of August the state of the works was such as to require a progress of 1.07 kilometre a day to effect this. But between the 5th and 20th of August, in spite of the loss of four working days—one from the non-supply of rails, a second from the occurrence of the Emperor's fête, on the 15th, and two more from rain—in the remaining seventeen days a length of thirty-five

kilometres was laid, being at the rate of 2.06 kilometres or 1.28 mile per day in the hottest part of the year.

This great speed was exceeded on the Candahar Railway. On the 4th of October, 1879, the operations were fairly commenced. From that time to the 14th of January, 1880, out of 101 days seven were lost. Eighty-four working days were thus left, in which 133½ miles of railway were laid, being at the average rate of 1.59 mile a day, or at twenty-four per cent greater speed than was attained on the Bordeaux line. But the heat of the Grandes Landes in August is far more formidable than was that at the foot of the Hala Mountains in December. On six of the working days a length of two and one-half miles was laid per day, and on one day as much as two and three-quarter miles.

In both these cases the real limit to progress was the time demanded for sending forward the materials ahead of the work. Thus on the Candahar line, out of a cost of £515 per mile for the work only, £171 per mile was the cost of the actual laying the way, £344 being the cost per mile of forwarding the materials. On the Bordeaux line the whole of the materials were sent on over the line itself, temporarily laid for that purpose, and the greater part of the heavy expenditure for forwarding was thus saved.

On the line from Ismailia to Zagazig the facilities afforded for the transport of materials by the existing road and by lighterage along the Sweet Water Canal are so great that it may be said that the limit of speed will be determined almost wholly by the number of competent workmen who may be available on the spot. In the Landes the limit to the actual laying power was found to lie in the number of shipwrights, or men accustomed to the use of an auger. It was essential that these should be English workmen, as the French were quite unable to use this valuable tool with accuracy and dispatch. Provided this requirement has been borne in mind there seems no insuperable difficulty in attaining or even exceeding the greatest Candahar speed of two and three-quarter miles a day on the railway from Ismailia to Zagazig. Bonaparte, among the number of troops detailed for the expedition to Egypt, included two companies of workmen, besides miners and pontoniers. The point to which experience leads us to look as fixing the limit of rapid railway laying is the supply of workmen capable of doing first-rate work with the auger. There are, however, two branches of the Nile to cross—one at six and one at four miles before arriving at Zagazig.

### The Place for Locomotive Cabs.

CORRESPONDENT "E. J. R.," of the *Philadelphia Record*, writing from Reading, Penn., under date of August 26, in reply to an article which had previously appeared in that paper upon the necessity for a "pilot" to accompany each locomotive, and upon which we commented in our last issue says:—

"I am an old railroad man of over thirty years' standing and experience. Your recent article speaking of a "pilot" for every locomotive drawing a train is much more important than I suppose you imagine. While I do

not see the necessity for a pilot to control the engineer and conductor, I think the position of the engineer should be in a cab located on the front platform or bumper of his engine. Very nearly all the locomotives of the present day are so constructed that the view of the engineer is confined to a line straight ahead. On most engines now running, the engineer, being on the right-hand side, cannot see the track fifty feet ahead of him on a left-hand curve. This may seem a startling assertion, but is, nevertheless, a true one, and a large majority of the accidents on railroads caused by running into land slides or the hind end of trains are due to this cause. An engineer, as a rule, is forced to sit in a strained position, most of the time with his head out of the cab window, to get even a partial view of the track ahead; and, perhaps, at the moment when he straightens himself up to relieve his tired muscles, he pops into some obstruction, and an accident (?) is the result. I am a practical locomotive engineer, and know whereof I speak.

"There is no difficulty whatever about placing the engineer in the position on his engine that will obviate all this risk of accident that arises from an imperfect view of the track. Ross Winans, of Baltimore, built an engine for the Reading Railroad Company, to haul passenger trains, that had the cab on the front platform, and it was the most pleasant to ride on of all the engines I ever saw. The Philadelphia and Reading Railroad Company set the engineer's cab much further ahead on their locomotives than any other railroad or builder. The engine builder who breaks through the present prejudice and puts the engineer in the proper place on his engine will take a step that will not only pay, but will add to the safety of the engineer and the train behind him."

### Mexican National Railway.

THE first passenger train on the Mexican National Railway reached Monterey, Mexico, on the 31st of August. The road is now completed from Corpus Christi, Texas, to that point, a distance of 333 miles. Monterey is one of the business centers of Mexico, and has a population of about 40,000. It is connected by rail with Laredo. An excursion over the road from that point is promised for the 16th inst. Regular trains will be run as soon as the track is ballasted. Between the 26th of August and the 1st of September a little over three miles of rails were laid each day by the construction party, that being necessary to enable them to reach Monterey by the day named. The company have now 520 miles finished in Mexico and Texas and claim that they will have 600 miles in October. Monterey is about 500 miles from Maravatio, which point it is promised the track shall reach from the City of Mexico next month. It is stated that over 900 miles have been subscribed for.

The Toluca division was opened for passengers on the 4th inst.—the Government Engineers having reported that it was solidly built. Toluca is 46 miles west of the City of Mexico. An excursion train passed over the road on the 2d inst., to Toluca, carrying the Cabinet Ministers, Congressmen, and many other distinguished persons, including ex-President Diaz. It will take some little time to perfect arrangements for freight traffic.

## OUR BOSTON LETTER.

## Being a Review of Events.

(From Our Special Correspondent.)

## THE FORBIDDEN CONSOLIDATION.

For the last two years a scheme has been afloat to consolidate the Boston and Lowell Railroad with the Concord Railroad. It was wisely thought that much money could be saved annually if one set of officers managed both these systems, as they would not aggregate a large mileage. The Boston and Lowell main line to Lowell, a distance of 26 miles, joined on to the Concord Railroad, which extends to Concord, N. H., 49 miles further, making a total main line of 75 miles. The legislatures of both New Hampshire and Massachusetts were petitioned, and without waiting for the consent thereof the articles of consolidation were made out, the usual inventories taken and everything made ready for the sanction of the great and general courts, to be followed by the consent of the stockholders of both roads. They even went so far as to move the offices of the Concord Railroad down into those of the Lowell road in this city. About this time the New Hampshire Legislature forbid the consolidation under an old law, extant. Treating this as mere chaff the joint officers went ahead, endeavoring by legal quibbles to set aside this decision. New cars were built, and they were painted "Boston, Lowell and Concord Railroad." About this time came a voice from the Granite State crying, in the words of the Rajah in "Around the World in Eighty Days," "The law, the law; Respect the law," and sent the Concord road a summons for contempt of court. The officers thereof hurried around, and among other things had an S painted on the new cars, making them read, "Boston, Lowell and Concord Railroads," and announced that the two roads only happened to have the same officers; and "the law" was satisfied, and its head, which had risen in anger, sank peacefully to its bosom again, while the two roads above mentioned rejoiced daily in having "pooled their issues."

This coming winter it is said that new efforts are to be made toward building the Lake Shore Railroad of New Hampshire, which will extend from Alton Bay to Weirs along the shore of Lake Winnipiseogee, a distance of 17 miles, and its estimated cost is \$500,000. This road, if built, will be operated in the interest of the Boston and Maine, and give them a connection at Weirs with the B., C. and M. Railroad to the White Mountains. Brave attempts were made last winter to get the charter of this road through the New Hampshire Legislature, but it met with great opposition. The average New Hampshire legislator is sharp, and not a member of the unwary, for although it was alleged that the pockets of the great and general court were full of Boston and Maine passes good for that winter, the project failed to go through. Perhaps the legislators are looking for "annu-als" or "life's," so that they would be useful during the beach and mountain seasons. Anyway, many think that this year the charter will be obtained.

The Eastern Railroad is having at present a

tremendous passenger traffic. One train last week had to be divided into two sections, with ten cars each. This company report the heaviest passenger travel this past summer in the history of the road. The fine cars built by this road early in the season have been duly appreciated.

A thoughtful man traveling over roads leading from the beaches or mountains at the present time might well come to the conclusion that the American people were fast becoming an affectionate and loving race, were he to judge from the large number of osculatory performances which are daily witnessed at the stations on these lines. The writer, coming over a road leading from one of these resorts the other day, had the felicity of seeing a performance calculated to try at least the soul of the man who had to go through it. At Lowell the usual crowd was gathered to see the incoming train, and there was the customary amount of expectation to be seen on the faces of the people. Conspicuous among them was a man whose face showed that joy was in store for him, and the sequel proved that he was not to be disappointed. After the train had come to a standstill there emerged from it a procession consisting of four women, two children and a baby, which headed for the man before mentioned, with the exclamation from a child of "There's papa." They rapidly approached each other, and it was evident that the woman carrying the baby was his wife, and therefore entitled to the first salute. A dilemma here presented itself to the man as to whether he should kiss his wife first or the baby, and for a minute it staggered him. Finally, seeing from appearances that it would not be safe to make any distinctions, he managed to bring both their faces together and to obtain a sort of consolidated joint osculation eminently satisfactory to all three, then he hurriedly kissed the clamorous small boys and two of the women and backed away with a very red face and a feeling that he had done his duty. A sharp pull on his sleeve caused him to turn towards his better half, when he discovered to his horror that he had in his haste skipped the third woman. He gave one look at her, shut both eyes, made a rush accompanied by an explosive sort of a sound, and then after a glance to see if any had got away, he retired from public view inside the waiting-room. Which led the JOURNAL man to reflect that, as there were 68,000 more women than men in this State, the daily number of similar performances must foot up large.

The new steamship Cyphalonia of the Cunard Line reached this port on the 4th, with the largest number of cabin passengers ever brought here by one ship. There were 144 cabin and 411 steerage passengers. The ship is a fine one, and on her first trip. She is 5,500 tons, built of iron, and 440 feet long by 47 wide, and has all the modern improvements. Her cabins are among the finest on the Atlantic, and she will be a great accession to the Cunard fleet.

The Fitchburg Railroad is about to make important changes in its time-tables, taking effect September 4th. Several trains will be discontinued. It is about time now for numbers of trains to be taken off the roads whose business covers many resorts.

The Boston and Lowell Railroad also changed its time table, to take effect September 4th.

The Fitchburg Railroad is laying two more tracks through the viaduct under the Boston and Lowell Railroad at Cambridge, which crosses it above grade.

On all the roads running out of here are to be seen boxes in the passenger cars labeled "tools," in accordance with the State law passed last winter. These boxes contain a saw, crow-bar, axe and hammer, for use in case of accident. These are usually placed in the center of the car, and under certain circumstances might save many lives.

The Boston and Albany Railroad is building 9 new freight cars at its Springfield shops, and repairing 10 locomotives so that when they go forth they will be as good as new. The passenger business of this road has been very heavy all summer, many of their western trains are at present drawn by two engines, and parties desiring sleeping-car berths have to engage them a week in advance to obtain any sort of a choice.

An old lady on the Old Colony Railroad the other day, inquired of the conductor "if there would be any 'dericks' waiting at the depot to take her across the city." After some questioning it was found out that she wanted a "Her-die." It is safe to say that she came from the Old Colony region on the Cape.

It appears as if the Eastern Railroad was bound to consolidate with somebody; and now that the Boston and Maine won't take them, it is rumored that they are going to consolidate with the Maine Central, and the European and North American. Such an action would make a fine through line from Boston to the Provinces all rail.

The baggage men of all the roads complain of the great quantities people have taken with them this summer. A train at the Fitchburg depot the other night, which had come down from Vermont over the Cheshire Railroad, had only 123 pieces of baggage on board for the poor "smashers" to play with. It is not yet known whether there was any dynamite in any of it or not. "CURTIS."

Boston, September 5, 1882.

The Lobdell Car Wheel Company, of Wilmington, Del., are moving into their new foundry at South Wilmington, which has just been completed. The new foundry has a capacity of five hundred wheels daily, which can be increased to seven hundred by using space now occupied for other purposes. They are now averaging two hundred and fifty wheels, and say that business is good.

BOWERS, DURÉ & Co., of Wilmington, Del., are still working on the cars for the Manhattan Elevated Railroad. They have already delivered thirty, and expect to deliver ten more about the middle of the month. They are building six very handsome cars for the Norfolk and Western Railroad. These cars are finished in Eastlake style, have washstands and plate-glass mirrors in the toilet-room, and are very handsome in all particulars of finish. They are also building two sleeping-cars for the Georgia Railroad, and in the freight car department have just completed 100 20-ton box cars for the Shenandoah Valley Railroad, and are now working on one hundred and eighty hopper-bottom gondolas for the Norfolk and Western Railroad. They are running full-time and express themselves as well satisfied with prospects for business this fall.



## List of Patents for Inventions Relating to Railway Interests.

Bearing date of August 29, 1882.

- 263,349. Flue Cleaner: PHILIP OFFER and HERMANN CHALL, Cleveland, Ohio. Filed June 26, 1882. (No model).
- 263,353. Electric Motor: DESIRE THOMAS PIOT, Great Titchfield street, County of Middlesex, England. Filed May 17, 1882. (No model). Patented in England Nov. 5, 1881, No. 4,851, and in France May 2, 1882.
- 263,356. Steam-Engine-Cylinder Lubricator: OSCAR A. ROLLINS, Campello, Mass. Filed July 5, 1882. (No model).
- 263,362. Spark-Arrester: MATHEW A. SIMS, Warrenton, Va. Filed April 3, 1882. (No model).
- 263,363. Car-Starter: CHARLES A. SULZMAN, Waterford, N. Y. Filed July 12, 1882. (No model).
- 263,374. Lubricator: THOMAS M. WILSON, Indianapolis, Ind. Filed April 21, 1882. (No model).
- 263,382. Force Pump: HIRAM BLAKE, Keene, N. H. Filed June 12, 1882. (No model).
- 263,396. Signal Lantern: JOHN H. EWING, Wheeling, W. Va., assignor to the Ewing & Bill Lantern Company, same place. Filed April 17, 1882. (No model).
- 263,399. Adjustable Belt-Tightener: WILLIAM L. GARDNER, New York, N. Y. Filed June 9, 1882. (No model).
- 263,401. Means for Extinguishing Fire in Railway Trains. ALMON M. GRANGER, Boston, Mass. Filed February 4, 1882. (No model).
- 263,410. Injector: LOVREN E. HOGUE, Sandy Lake, Pa. Filed February 1, 1882. (Model).
- 263,456. Smoke-Consuming Attachment for Furnaces: JACOB J. ANDERSON, Rochester, Pa. Filed July 22, 1882. (No model).
- 263,460. Lubricator: GEORGE W. BAKER, Chicago, Ill. Filed April 24, 1882. (no model).
- 263,470. Grate for Boiler Furnaces: WILLIAM BOWERS, Carbondale, Pa. Filed July 22, 1882. (No model).
- 263,482. Wire Fence: EMILE CHAVANNES, Altoona, Iowa. Filed February 23, 1882. (No model).
- 263,488. Shaft-Coupling: MICHAEL R. DAVIS, Pink Hill, Tex. Filed July 15, 1882. (No model).
- 263,490. Oil Conductor for Car-Axle Boxes: JULIUS DE LONG, Allegheny, Pa. Filed June 14, 1882. (No specimens).
- 263,496. Spark-Arrester: JOHN H. FILER and JAMES GILDUFF, Mattoon, Ill. Filed May 23, 1882. (No model).
- 263,505. Rotary Engine: ALEXANDER C. GIBSON, Toronto, Ontario, Canada, assignor of one-half to Edmund Armand, same place, Filed April 10, 1882. (No model).
- 263,514. Vacuum Exhaust-Pipe: DENNIS HARRIGAN, Somerville, Mass. Filed June 13, 1882. (No model).
- 263,532. Steam Boiler Furnace: PETER KIEFER, Cincinnati, Ohio, Filed May 29, 1882. (No model).
- 263,566. Traction-Engine: JACOB NIXON, Winfield, Kansas, Filed March 15, 1882. (No model).
- 263,569. Spark-Arrester: JOHN H. OSTERBERG, Oshkosh, Wis. Filed April 21, 1882. (No model).
- 263,573. Rotary Engine: JOHN PATTEN, San Francisco, Cal. Filed August 20, 1881. (No model).
- 263,615. Steam Generator: JAMES C. STEAD, Brooklyn, N. Y. Filed April 24, 1882. (No model).
- 263,629. Journal Bearing and Box: ROBERT W. TRAYLOR, Richmond, Va. Filed May 25, 1882. (Model).
- 263,661. Feeder for Locomotive Injectors and Pumps. DANIEL B. MURPHY, Newark, assignor of one-half to Gurdon D. Johnson, Granville, Ohio. Filed July 8, 1882. (No model).
- 263,663. Steam Boiler Furnace: WILLIAM H. ODELL, Yonkers, N. Y. Filed October 15, 1881. (No model).
- 10,190. Apparatus for Heating Cars: INA A. SALMON, Boston, Mass. Filed July 17, 1882. Original No. 227,997. Dated May 25, 1880. Reissue.

The truck wheels to be used under the new parlor cars now being built at the car shops in Reading, Penn., it is said, cost \$109 per pair. They are known as the compressed paper wheels with steel tires. The entire set for one car will cost \$654. The cost of each car is estimated at \$10,000 to \$12,000. The first car is nearly completed and another is under way.

## Delaware Railroad and its Branches.

J. F. PENNINGTON, writing in the *Industrial Review* for August, recounts the development of the Peninsula Railway system, as follows:

In 1831, a dense unbroken forest of gloomy pines stretched from New Castle, Del., southward for many miles; the country was sparsely populated, and the rich and varied resources of the Delaware and Chesapeake Peninsula—the valuable oyster deposits, the great belt of oak and pine timber extending along the ocean front, and the products of the bays, rivers and estuaries—clams, crabs, fish, etc.—were as yet unknown to those energetic pioneers of progressive civilization, who were, however, knocking loudly at the doors which opened into this great country; and they practically crossed the threshold when they triumphantly consummated the first grand achievement in modern science and mechanism—the construction of the first link in the Peninsular Railroad chain, known as the New Castle and Frenchtown, 16 miles in length, running from New Castle, Del., to Frenchtown, Md., an obscure village on the Elk River. The rolling-stock was in keeping with the crude ideas of the times—constructed with a view to hard service and utility rather than to show and elaborate ornamentation. It was known as the “omnibus” line, the cars being modelled upon a plan identical with the omnibus of this more modern date. They were mounted upon four wheels, and the passengers occupied the seats vis-à-vis. The engine was without a cab, and was stopped at intervals to take on a fresh supply of wood fuel.

The first tangible evidence of the future result of the benefits of this railroad enterprise was the importance it gave to commerce. Vessels were dispatched from Baltimore to connect with this road at Frenchtown; thence freight and passengers were transferred to New Castle, and reached points north by sail-vessel or stage-coach. A strong opposition to railroads had already sprung up among the people, and this opposition, particularly among the operators of the coach lines, was intensified when there became a perceptible diminution in their receipts, and the driver, as his horses plodded along through heavy sand over lonesome dreary roads, relieved the monotony of his irksome duty by singing the famous song which began with “God curse the railroads and canals.” But the current was irresistible.

The success of this experimental road inspired its projectors with a desire to extend their sphere of usefulness. On the 7th of July, 1837, the first regular train passed over the newly constructed road from Wilmington, Del., to Perryville, Md., and a few years later the tracks were extended to Philadelphia. This road is the Philadelphia, Wilmington and Baltimore Railroad, the connecting link between the North and South. The New Castle and Frenchtown Railroad was soon absorbed by the new line, having as it did increased facilities and valuable outlets both at Philadelphia and Baltimore.

The Delaware Division of the Philadelphia, Wilmington and Baltimore was completed to

Delmar, the present terminus, in 1860. It begins at Delaware Junction two miles from Wilmington, and traverses the great fruit, agricultural and timber region of the Peninsula, a distance of 96 miles. This is the substantial backbone of the great network of collateral branches ramifying in every direction through the Peninsula, which Mr. Pennington enumerates as follows:—

The Breakwater and Frankford, from Georgetown to Selbyville; the Junction and Breakwater, from Harrington to Lewes on the Delaware Bay, connecting with the Old Dominion Steamship Company for New York; the Dorchester and Delaware, from Seaford to Cambridge, Md., on the Choptank, in daily communication with Baltimore by steamboat. (All these roads are partly or wholly operated in Delaware.) The Smyrna and Delaware Bay, from Pierson's Cove on the Delaware Bay, to Massey's Junction, Md.; the Delaware and Chesapeake, from Clayton, Del., to Oxford, on the Choptank, Md.; the Eastern Shore, from Delmar to Crisfield, Md., on the Anemessix, and the vast oyster fields of Tanger Sound; Kent county, from Bombay Hook, on the Delaware Bay, to Chestertown, on Chester River, Md.; the Queen Anne's and Kent, from Townsend to Centerville, Md.; the Wicomico and Pocomoke, from Salisbury through the great oak timber belt of Worcester county, to Ocean City, Md., a fashionable seaside resort on the Atlantic coast; the Worcester, from Selbyville to Franklin City, Va., and Chincoteague Island, via steamer; and the Worcester and Somerset, from Newtown Junction to Pocomoke City on the Pocomoke River, Md.

The cost of construction of these roads aggregates \$8,523,065; the number of miles in operation, 449; number of stations, 196; capital stock represented, \$4,500,000. Most of them have outlets on rivers which empty into the Delaware and Chesapeake bays, thus having direct connection with the cities and intermediate towns on the bays by steamer. Most of the towns and villages about which these roads circulate are the direct result of railroad enterprise, and to complete the grand system the prospective road from Pocomoke City to Cherrystone, Va., will make an air line from Florida to Maine, and put the products of the Peninsula into the Philadelphia and New York markets 24 hours earlier than at present.

By referring to the Advertisement in another column, of the Brown Manufacturing Company, of Providence, R. I., Manufacturers of Special Railroad Supplies, it will be seen that they have for sale Machinery Wipes, Absorbent Mops, Lamp Wicking for Packing, etc., etc., the prices for which may be learned by an examination of their card.

The instruments which will be used by the transit of Venus “observation” party in New Zealand, necessarily of the finest and most delicate nature, and requiring the greatest care in transportation, were loaded in an express car, which was dispatched from Washington on the 5th inst. attached to a fast passenger train, under an agreement, ratified by officers of the different railroad companies, that the car should be carried through to San Francisco without disturbing its contents.

## THE STOCK EXCHANGES AND MONEY MARKET.

## New York Stock Exchange.

Closing Prices for the week ending Sept. 6.

Th. 31. F. 1. Sat. 2. M. 4. Tu. 5. W. 6.

Adams Express.....					
Albany and Susq...					
1st mortgage.....					
2d mortgage.....	107%				
American Express...	96	95%	95%	95%	95%
Burl. C. R. & Nor...					
1st mortgage 5a...			101	101	100%
Canada Southern...	63%	63%	64%	63%	62%
1st mortgage guar...				93%	93%
Central of N. Jersey	77%	78%	78%	78%	78%
1st mort. 1890...					
7a, consol. ass...	109	109%	109%	109	
7a, convertible ass...	109%	109%	109		
7a, Income.....	108				
Adjustment.....	108				
Central Pacific.....	93%	93%	93%	93%	93%
6a, gold.....	115%			115	
1st M. (San Joa)					
1st M. (Cal. & Or.)					
Land grant 6a...					
Chesapeake & Ohio...	24	24	24	24	24%
1st pref.....			38		38
2d pref.....	26				
1st mort., series B	85%	85%	85%	85%	86
Chicago and Alton...					
Preferred.....					
1st mortgage.....					120
Sinking Fund....					
Chi., Bur. & Quincy	136%	136%	136%	134%	135%
7a, Consol. 1903...			128	128	
Chi., Mil. & St. Paul	124	124%	124%	123%	123%
Preferred.....	137%	140	139%	139%	134%
1st mortgage, 8a...			130		
2d mort., 7 3-10s...					
7a, gold.....			125		
1st M. (La. O. div.)					
1st M. (L. & D. ext.)			124		
1st M. (H. & D. div.)			118		118%
1st M. (O. & M. div.)					
Consolidated S. F.		124%	123		126
Chi. & Northwestern	147%	147%	148	147%	146%
Preferred.....	170	170	170%	170%	
1st mortgage.....					
Sinking Fund 6a...					
Consolidated 7a...					
Consol. Gold b'ds					125
Do, reg.....					
Chi., R. Isl. & Pac.	136	136	136%	136%	136%
6a, 1917, C.....					
Clev., Col. & Ind.	81%	81	80%	81	
1st mortgage.....					
Clev. & Pittsburg gr.					
7a, Consolidated...	124%				
4th mortgage.....					
Col., Chi. & Ind. Cent	13%	14	14		
1st mortgage.....					
2d mortgage.....					
Del. & Hud Canal...	115%	115%	116	116	115%
Reg. 7a, 1891...					
Reg. 7a, 1884...					
7a, 1894.....					
Del., Lack. & Western	145%	146%	147%	147	146%
2d mortgage 7a...					
Consol. 1907.....					
Erie Railway.....					
1st mortgage.....					
2d mort. 5a, ext...					
3d mortgage.....	101%	101%	101%	101%	101%
4th mort. 5a, ext...					
5th mortgage.....					
7a, Consol. gold...			127%		127
Great West. 1st mort			106		
2d mortgage.....	103%	103%			101%
Hannibal & St. Jo...			47%	48	48
Preferred.....	93%	93%	97%	95	93%
2a, Convertible...			106		92%
Houston & Tex. Cen	85				
1st mortgage.....			112		
2d mortgage.....					
Illinois Central...	138%	138%	139	139%	139
Lake Shore & Mich So	119%	119%	119%	119%	119%
Consol. 7a.....					
Consol. 7a, reg...					
2d Consolidated...					
Leh. & W. B. con. ass			105		105
Long Dock bonds...					
Louisville & Nash...	72%	72%	72%	72	72%
7a, Consolidated...					118%
Manhattan.....			53%		53%
1st pref.....	90				
Met. Elevated.....					91%
1st mortgage.....	99%	99	99%	99%	
Michigan Central...	98%	99	98%	98%	99%
7a, 1905.....	124%				
Morris & Essex...	127%		126		125%
1st mortgage.....			137%		

2d mortgage.....					
7a of 1871.....					
7a, Convertible...					
7a, Consolidated...	124				
N. Y. Gen. & Hud. R.	133%	134	134	133%	133%
6a, S. F., 1883...		102%			
6a, S. F., 1887...					
1st mortgage.....				132	
1st mortgage, reg...					
N. Y. Elevated.....					
1st mortgage.....			115%		115
N. Y. & Harlem...					
Preferred.....					
1st mortgage.....					
1st mortgage, reg...					
N. Y., Lake Erie & W	39%	39%	39%	39%	39%
Preferred.....			80		80
2d Consolidated...	98%	98%	98		97%
New ad 5a fund...					
N. Y., N. Hav'n & Hart	181				182
North Mo. 1st mort					118%
Northern Pacific...	50%	50%	51	51	52%
Preferred.....	93%	92%	93%	92%	94%
Ohio & Mississippi...	38%	38%		38%	38%
Preferred.....					
2d mortgage.....					
Consolidated 7a...					115
Consol. S. Fund...					
Pacific Mail S. S. Co	44%	45%	45%		44%
Pacific R. R. of Mo.					
1st mortgage.....	106	106%		106%	106%
2d mortgage.....					
Panama.....	167				
Phila. & Reading...	61	61%	62%	62%	63
Pitts., Ft. W. & Chi. gtd					
1st mortgage.....					
2d mortgage.....					
3d mortgage.....					
Pullman Palace Car	131%	132	132%	132%	132%
Quicksilver Min'g Co					
Preferred.....					
St. Louis & San Fran					
Preferred.....	58%		59	57%	
1st Preferred.....			98		99
St. L., Alt'n & T. H.		41%		42%	
Preferred.....					82
1st mortgage.....					
2d mort. pref...					
Income bonds...					
St. L., Iron Mt. & S					
1st mortgage.....					114
2d mortgage.....					
Toledo and Wabash...					
1st mortgage.....	107				
2d mortgage.....					
7a, Consolidated...	100				
St. Louis Division					
Union Pacific.....	116%	116%	117%	117%	117%
1st mortgage.....	116%	116%	116%	116	116%
Land Grant 7a...	114%	115	115	115	
Sinking Fund 8a...	122%				
United States Ex...	74%			73%	73%
Wabash, St. L. & Pac	36%	37%	37%	37%	37%
Preferred.....	66%	67	67%	67%	67%
New mort. 7a...					
Wells-Fargo Ex...	131	130%		131	132
Western Pacific b'ds					
Western Union Tel.	90%	90%	90%	90%	90%
7a, S. F. conv., 1900					

## Boston Stock Exchange.

Closing Prices for the Week Ending Sept. 6.

Th. 31. F. 1. Sat. 2. M. 4. Tu. 5. W. 6.

Atch., Top. & San. Fe.	94%	94%	95%	95%	94%
1st mortgage.....					
Land Grant 7a...			114		
Boston & Albany...	172				170
Boston and Lowell...					
Boston & Maine...	150			151	152
Boston & Providence	160				
Bos'n, Hart. & Erieys					
Burl. & Mo. R. L. G. 7a					
Burl. & Mo. R. in Neb					
6a, exempt.....	82				112
Chi., Burl. & Quincy	136%	136%	136%	134%	134%
Chi., Sand & Clev (\$50)			27%		27%
Concord (\$50).....					
Connecticut River...					
Eastern.....	42%	43%		43%	44
New 6a, Bonds...	109%		110	109	110

Fitchburg.....					130
N. Y. & New England	53	52%	53%	54	54%
7a.....					116%
Northern N. H.....					
Norwich & Worcester					
Ogden & Lake Cham					
Old Colony.....	132			133	133%
Ph., Wil. & Balt. (\$50)					
Portl'd, Saco & Ports					
Pueblo & Ark Val 7a	115				
Pullman Palace Car					
Union Pacific.....	116%	116%			117%
6a.....					
Land Grant 7a...					
Sinking Fund 8a...					118
Vermont & Mass...					
Worcester & Nashua	59				58
Cambridge (Horse)...					
Metropolitan (Horse)					
Middlesex (Horse)...					
Cal. & Hecla Min'g Co	251		252	255	255
Quincy.....	66	66%	66	66%	67

## Philadelphia Stock Exchange.

Closing Prices for the Week Ending Sept. 5.

W. 30. Th. 31. F. 1. Sat. 2. M. 4. Tu. 5.

Allegh'y Val. 7 3-10s		122			122
7a, Income.....					
Buff., Pitts. & West.	21%	21%	21%	21%	21%
Camd'n & Am. 6a, '83					
6a, 1889.....					
Mort. 6a, 1889...					
Camden & Atlantic					
Preferred.....	50	50		53	
1st mortgage.....					
2d mortgage.....					
Catawissa.....					
Preferred.....			55		
2d pref.....			54		
7a, new.....					
Del. & Bound Brook					
7a.....					
Elmira & Williamspt					
Preferred.....					
Hunt. & B. Top Mt.					15%
Preferred.....		28%		28%	
2d mortgage.....					
Lehigh Navigation...	43%	43%	43%	43%	43%
6a, 1884.....			103%		103%
Gold Loan.....			113%		
Railroad Loan...					
Conv. Gold Loan...					
Consol. Mort. 7a...	116%				
Lehigh Valley.....		62%		62%	62%
1st mort. 6a, coup					
1st mort. 6a, reg...					
2d mort. 7a...					131%
Consol. mort. 6a...					
Consol. mtg. 6a, reg					122
Little Schuylkill...					
Minehill & Sch. Hav'n			61%		
North Pennsylvania					64
1st mortgage 6a...		107			107
2d mortgage 7a...					
Genl. mtg. 7a, coup					
Genl. mtg. 7a, reg					122
Northern Central...	53%	54%	54	54%	54%
5a.....				97%	97%
Northern Pacific...	50%	50%	50%	51%	51%
Preferred.....	92%	93	92%	93%	94%
Pennsylvania R. R.	62%	62%	62%	62%	62%
1st mortgage.....					
Gen'l mort.....	192			128	
Gen'l mort reg...					
Consol. mort. 6a...					
Consol. mort. reg					
Pa. State 5a, new...					
do 4a, new...					
do 3a, 1912...					
Phila. & Reading...	30%	30%	30%	31%	31%
1st mortgage 6a...					
7a of 1893.....					
7a, new convert...			75	75%	75%
Consol. mort. 7a...			126		
Consol. mort. reg...					
Gen'l mort. 6a...	95%	95%	96%	96%	96%
Def. Income bonds					
Philadelphia & Erie	17%	18%	18%	18%	19%
1st mortgage 5a...		104%	104%		
2d mortgage 7a...	113%				113%
Pittsb., Cin. & St. L. 7a					120
Pitts., Tit. & Buff. 7a					94%
Schuylkill Navi't'n					
Preferred.....					
6a, 1895.....					
6a, 1907.....					
United Co. of N. J.	190%	190%	191		191
Hestonville, (Horse)					
Chestnut & W. (do)					



## Baltimore Stock Exchange.

Closing Prices for the Week Ending Sept. 5.

W. 30. Th. 31. F. 1. Sat. 2. M. 4. Tu. 5.

Baltimore & Ohio....	195					
6s, 1885.....						
Central Ohio (\$50)....	47					
1st mortgage.....						
Marietta & Cin. 7d....						
1st mortgage, 7d....						
2d mortgage, 7d....						
3d mortgage, 8a....						
Northern Cen. (\$50)....	53 1/4	54 1/4	54	54 1/4	54 1/4	
2d mort. 6s, 1885....						
3d mort. 6s, 1900....						
6s, 1900, gold.....						116 1/2
6s, 1904, gold.....						
Pitts. & Connellsv. 7d....						
Virginia 6s Consol....		59 1/4		60	60 1/4	
Consol. coupons.....		59 1/4				
10-40 bonds.....	42 1/4	42 1/4		43		43 1/4
Def'd Certificates.....						
Western Maryland....	16 1/2	16 1/2	16	16		
1st M., end, by Balt....						
2d M., do.....						
3d M., do.....						
1st M., unendorsed....						
2d M., end, Wash Co....						
2d M., preferred....						
City Passenger R. R....						

## London Stock Exchange.

Closing Prices.

	Aug. 25.	Aug. 18.
Baltimore and Ohio 5s, 1907.....	106	106
Central of N. J., \$100 shares.....	85	90
Do. consol. mort.....	112	114
Do. Income Bonds.....	92	96
Central Pacific of Cal., \$100 sha.....	94	95
Do. 1st mort. 6s, 1895-98.....	117	118
Del., G'd Haven & Mil. Equip bds. 116	118	118
Do. Con. M. sp. c., till '83 after 6p. c. 114	116	114
Illinois Central \$100 shares.....	130	141
Do. S. F. 5s, 1903.....	106	108
Lehigh Valley Cons. mort. 1903.....	115	119
Louisville and Nashville mort. 6s 97	99	98
Do. capital stock \$100 shares.....	74	76
N. Y. Cen. & Hud. R. mort. bonds. 132	136	132
Do. \$100 shares.....	137	139
Do. mort. bonds (stg.).....	121	123
N. Y. Lake Erie & West. \$100 sha. 39 1/2	39 1/2	39 1/2
Do. 6 p. c. pref. \$100 shares.....	70	81
Do. 1st Con. Mort. bonds (Erie). 126	129	127
Do. do. Funded Coupon bonds. 124	127	126
Do. 2d Consol. Mort. bonds.....	98	100
Do. do. Funded Coupon bonds. 95	97	96
N. Y. Pa. & Ohio 1st mort. bonds. 47	48	47
Do. Prior Lien bonds (sterling). 103	108	103
Pennsylvania \$50 shares.....	63 1/2	63 1/2
General Mortgage.....	123	123
Phil. & Erie Gen. mort. 6s, 1900.....	119	117
Philadelphia & Reading \$50 sha.....	31	30 1/2
General Consol Mortgage.....	115	117
Do. Improvement Mortgage.....	104	106
Do. Gen. Mtg. '74, ex-def'd coup. 96	98	97
St. L. Bridge 1st mort. gold bond. 125	127	125
Do. 1st pref. stock.....	97	100
S. P. of Cal., 1st mort 6s, 1905-6. 108	110	108
Union Pacific 1st mtg. 6s, 1896-9. 118	120	118
Wabash, St. L. & P. \$100 shares.....	35 1/2	36 1/2
Do. \$100 pref. shares.....	65	66 1/2
Do. gen. mort. bonds.....	85	87

## AMERICAN RAILROAD JOURNAL.

## Financial and Commercial Review.

THURSDAY EVENING, September 7, 1882.

In the money market this morning the quotation for call loans on stocks was 5@6 per cent—few loans being made above 5 1/2 per cent. On United States bonds the quotation was 3@3 1/2 per cent. The rate for prime commercial paper was about 6 per cent. In the afternoon the quotation for call loans on stocks was 5 per cent, at which rate the bulk of the business was transacted.

The posted rates for prime bankers' sterling were 4.85% and 4.89% @ 4.90; the actual rates were 4.84% @ 4.85 and 4.88% @ 4.89, with cables 4.89% @ 4.89%, and prime commercial bills 4.83% @ 4.83 1/2. The actual rates for Continental bills are as follows: France, 5.79% and 5.15; Marks, 94% @ 94% and 95% @ 95%, and Guilders, 40 and 40 1/4.

The first of the new series of 3 per cent bonds was issued from the Treasury Department at Washington on the 4th inst. There are five denominations of these bonds—\$50, \$100, \$500, \$1,000, and \$10,000. Three hundred and fifty million dollars of the bonds have been printed. Each denomination of the new bonds has a distinctive vignette, as follows: \$50, Fessenden; \$100, De Witt Clinton; \$500, Franklin; \$1,000, Garfield; \$10,000, Hamilton. They are printed on distinctive paper, with threads running through it, similar to the paper used for the national bank notes and greenbacks. Each bond bears a view of the Treasury Department. The corner-pieces are of scroll-work, in which is interwoven the denomination of the bond. The bonds are called the "Three Per Cent Loan of 1882," which legend is printed across the upper part of the face. On the right hand, in the border, are the words, "Act of July 12, 1882." On the opposite border are inlaid letterings of "Three per Cent." Near this are engraved "facces," entwined with ribbon, bearing the motto, "E Pluribus Unum," with the monogram "U. S." On the center-piece on the right and left of the portrait is the denomination in geometric lathe-work. In each of the letters of the legend is engraved "United States of America," in white-faced letters on a black background forming the shank of the letters. In the title of the bond "United States of America" is printed in large scroll letters across the face, under the vignette. All are dated August 1, 1882. The denomination is engraved in tint to prevent photographing. The numbers are printed on scroll-work panels on each side of the portrait. The panels and the denominations are printed in fugitive tints to prevent the alteration of the number. The space for the name of the payee is also tinted. There are three seals on the bonds—the printed seal of the Secretary's office, an embossed seal, and a printed seal of the Treasury Department. The face of the bonds is printed in black with five distinct tints. The color of the backs is different in each denomination—green on the \$50, blue on the \$100, red on the \$500, brown on the \$1,000, and black on the \$10,000. There are five different patterns of scroll work on the back of the bonds. One peculiarity of the new bonds is that they are printed in such a way that when fold the whole story of the bond can be read without opening the bond.

A mortgage for \$160,000,000 was recorded in the office of the Recorder of Deeds at Philadelphia, Penn., on the 31st ult. It was executed jointly by the Philadelphia and Reading Railroad and Philadelphia and Reading Coal and Iron Companies and covers the entire property of every kind, real and personal, together with all rights, privileges and franchises, including all leasehold interests. This is the mortgage under which the five per cent consols are issued, the proceeds of which are intended to redeem all other outstanding obligations of the company, so that it will ultimately become a first lien for the only bonds outstanding, namely the five per cents. Copies of the mortgage will also be recorded in the various counties of Pennsylvania, New York and Virginia, where the companies' property is located.

Notice has been given by the Secretary of the Treasury at Washington that the exchange of 3 1/2 per cent for 3 per cent bonds will be suspended from September 20 until November 1, when it will be resumed and continued until further notice. This action is taken in order to allow the preparation of the schedules and interest checks for the payment of the November 1 dividend on the United States registered bonds of the acts of July 14, 1870, and January 20, 1871, continued at 3 1/2 per cent, which have not been exchanged into 3 per cent bonds, and the dividend which will be due at the same time on the 3 per cent bonds of the act of July 12, 1882, which are now being issued. The gold certificates will not be ready before the 1st of October.

The financial statement of the Comptroller issued on the 31st ult., shows that the total funded debt of the City of New York on that day was \$136,941,518.59, not including \$16,959,529.40 revenue bonds issued in anticipation of taxes. During the month of August warrants were drawn against the City Treasury to the amount of \$1,987,969.50, making a total of \$26,955,365.33 since January 1. From January 1 to August 31, inclusive, stocks and bonds were issued to the amount of \$18,353,295.40. The net funded debt of the city on the 31st of Aug., 1882, was \$97,532,480.51, against \$98,290,206.17 for December 31, 1881. The total of the revenue bonds issued under special laws December 31, 1881, was \$4,328,059.06, and the total issued up to August 31, 1882, was, as stated above, \$16,959,529.40, showing that despite this large extra issue of revenue bonds the net city debt was reduced nearly a million.

It was officially announced on the 5th inst., that payment would be made immediately, without rebate, of the \$16,000,000 of bonds covered by the 115th call, which mature on the 13th inst. The text of the announcement was: "The payment of bonds included in the 115th call

will be made immediately, without rebate of interest, and those who choose can present them for payment to the Assistant Treasurer of the United States at New York."

From a statement furnished by the Chief of the Bureau of Statistics, at Washington, we learn that for the month ending July 31, 1882, the excess of imports over exports of merchandise was \$11,387,712, while for the corresponding month of 1881 the excess of exports was \$10,610,936. For the seven months ended July 31, 1882, the excess of imports was \$50,824,742, while for a corresponding period in 1881 the excess of imports was \$108,610,908. For the twelve months ended July 31, 1882, the excess of exports was only \$3,904,035, as against \$256,613,067 for the twelve months ended July 31, 1881. For the twelve months ended July 31, 1882, the excess of exports of gold and silver coin and bullion was \$12,596,098, while for the corresponding period ended July 31, 1881, the excess of imports was \$90,666,977. The value of the imports of merchandise into the United States for the twelve months ended July 31, 1882, was \$738,044,236, and for the twelve months ended July 31, 1881, \$637,782,325. Values of the exports of domestic and foreign merchandise from the United States for the twelve months ended July 31, 1882, were \$741,948,271, and for the twelve months ended July 31, 1881, \$894,395,392.

By referring to the Public Debt Statement on another page it will be seen that the total debt of the United States on the 31st of August was \$1,901,866,690.42, less cash in the Treasury \$242,960,518.46, leaving net \$1,658,926,171.96. The debt was reduced \$6,128,261.24 in August, and \$29,988,288.76 since the 1st of July. Of the bonded debt \$250,000,000 bears 4 1/2 per cent interest, \$739,251,450 bears 4 per cent, \$434,252,300 bears 3 1/2 per cent, and \$14,000,000 (navy pension fund) bears 3 per cent. Interest has ceased upon \$12,472,725, and upon \$440,204,928 there is no interest, being in the shape of currency, certificates of deposit, and gold and silver certificates. Of the cash in the Treasury \$141,629,211 is entered as available. In addition to the above there are outstanding \$64,623,512 bonds issued to Pacific Railroad companies, and known as currency 6s, which mature from 1895 to 1899.

The disbursement from the United States Treasury in August, other than payments on account of the public debt and interest, were: For the War Department \$5,459,818.16; civil and miscellaneous \$7,677,956.48; Navy \$1,207,061.79; Interior, Indians, \$1,053,141.63, and pensions \$0,702,078.07—total, \$25,100,051.13.

The Boston Transcript says it is understood that the Mexican Government is disposed to reconsider its action in forfeiting the concession of the Tehuantepec Railroad. It seems to realize that its hasty action has done injustice to those who embarked capital in the enterprise, and that the harsh forfeiture of the concession may have the effect of keeping out foreign capital from Mexico. For the credit of the Government as well as for the benefit of those interested in the enterprise, it is to be hoped that Mexico will reconsider its unfavorable action on the Tehuantepec Railroad.

The receipts from Customs at the New York Custom House for the month of August amounted to \$16,483,260.72, of which \$10,996,742.90 were for duties on imports and \$5,486,517.82 for duties on withdrawals from warehouse. The receipts for August, 1881, amounted to \$15,204,469.58. The increase this year over last was \$1,278,791.14.

On substantially the same mileage as last year the New York and New England Railroad shows an increase in gross earnings of 33 per cent, and in net earnings of 75 per cent. It is believed that it will earn from \$5,000,000 to \$6,000,000 per annum after January next, as in a few weeks the Lehigh and Hudson River Railroad will be open for business to Newburg, giving a direct connection with the anthracite coal fields. The lines of the company, which represent a market value of \$25,000,000, have actually cost \$65,000,000. Within thirty days all the floating debt of the company will be paid and a surplus of nearly \$2,000,000 will remain in the treasury. The Pennsylvania Railroad Company is said to be extensively interested in this property.

The total stock and bonds of the New York, Chicago and St. Louis Railway Company is \$69,000,000, of which \$50,000,000 is stock—\$28,000,000 common, and \$22,000,000 preferred. Of the bonds \$15,000,000 draw 6 per cent, and \$4,000,000 equipment bonds draw 7 per cent. The latter bonds are payable \$400,000 annually for ten years, be-

ginning 1885 and ending 1894. The interest, however, begins October 1, 1882, with the opening of the road. It will thus be seen that the annual interest on the bonded indebtedness of the road is but \$1,180,000.

The following quotation of sales of railway and other securities, for the week, are in addition to those given elsewhere in our columns.

**New York.**—Atchison, Colorado and Pacific 1st, 92; Boston and New York Air Line pref., 79½; Chicago, St. Paul, Minneapolis and Omaha, 55½; do. pref., 112; do. consol., 106; Chesapeake and Ohio cur. 68, 51½; do. 1st, Series A, 108; Chicago and Northwestern S. F. 58, 101½; Chicago, St. Louis and New Orleans 58, 105; Chicago, Burlington and Quincy 88, 102; do. Iowa div. 48, 87½; do. Denver div. 48, 84; Cairo and Fulton 1st, 106½; Chicago, St. Paul and Minn. 1st, 111; Chicago, Milwaukee and St. Paul, Southern Minn. div. 1st, 107½; do. Chicago and Pacific West div. 1st, 93½; Columbus, Chicago and Indiana Central inc., 50; Denver and Rio Grande, 58½; do. 1st, 114; do. consol., 99½; Delaware and Hudson 1st, Penn. div., 130; East Tennessee, Virginia and Georgia, 103½; do. pref., 18½; do. 58, 74; do. inc., 43; Evansville and Terre Haute, 80; do. 1st, 96; Fort Worth and Denver 1st, 98½; Green Bay, Winona and St. Paul, 13; do. inc., 25; Gulf, Colorado and Santa Fe 1st, 107½; Houston and Texas Central genl. mort., 108; Hannibal and St. Joseph consol. 68, 104; Indiana, Bloomington and Western, 44½; do. Eastern div. 68, 95; Indianapolis, Decatur and Springfield 1st, 104; Illinois Central, Middle div. 58, 108; International and Gt. Northern 1st, 105½; do. 68, coupon, 86½; Keokuk and Des Moines 1st, 105; Kansas Pacific 1st consols, 104½; do. 68, Denver div. 58, 109; Lafayette, Bloomington and Muncie 1st, 102; Long Island, 60; Lake Erie and Western, 38½; do. 1st, 102½; do. inc., 54; Louisville, New Albany and Chicago, 73; do. 1st, 102½; Lehigh and Wilkesbarre inc., 85; Louisville and Nashville 2d, St. Louis div., 51; do. genl. mort. 68, 95; do. Nashville and Decatur 1st, 120; Milwaukee and Madison 1st, 114; Michigan Central 58, 98; Minneapolis and St. Louis, 35½; do. pref., 72; do. 1st, 115; Missouri, Kansas and Texas, 39½; do. consol. 78, 106½; do. 2d, 68; do. genl. mort. 68, 87; Missouri Pacific, 109½; do. 1st consol., 101½; do. 3d, 111½; Milwaukee, Lake Shore and Western, 57½; do. 1st, 101; Manhattan Beach, 24; Mobile and Ohio, 21; Memphis and Charleston, 55; New York City and Northern genl. mort., 57½; New York, Chicago and St. Louis, 16½; do. pref., 36; do. 1st, 94½; Nashville, Chattanooga and St. Louis, 61½; do. 1st, 115; New York, Ontario and Western, 26½; Norfolk and Western, 20; do. pref., 56; do. genl. mort., 103; New Orleans Pacific 1st, 91½; Northern Pacific 1st, 103½; Ohio Central, 18½; do. 1st, 91½; do. inc., 36; Ohio Southern, 17½; do. 1st, 83; do. inc., 33; Oregon Railway and Nav., 156½; do. 1st, 107½; Oregon Transportation, 94½; Oregon Short Line 68, 103½; Peoria, Decatur and Evansville, 36½; do. 1st, 103; do. Evansville div. 1st, 101; Rochester and Pittsburgh, 25½; do. inc., 53; Richmond and Danville, 115½; do. 1st, 100½; do. debent., 77½; Richmond, Danville and West Point, 63; Rome, Watertown and Ogdensburg ext. 58, 74; do. inc., 39½; St. Paul and Duluth, 33½; do. pref., 88½; St. Paul, Minneapolis and Manitoba, 149; do. 1st, 110; do. 2d, 112; Dakota ext. 1st, 107½; St. Louis, Kansas City and Northern R. E. 78, 105; Southern Pacific of California 1st, 106½; St. Louis, Jacksonville and Chicago 1st, 118; St. Louis and San Francisco 2d, Class B, 91; St. Paul and Sioux City 1st, 111; South Carolina inc., 61; do. 2d, 95; St. Louis, Iron Mountain and Southern 58, 81; do. Arkansas Br. 1st, 108; Toledo, Delphos and Burlington inc., 20; Texas and Pacific, 50½; do. inc. Land Grant, 64; do. Rio Grande div. 1st, 85; Texas Central S. F. 78, 108½; Wabash, St. Louis and Pacific, genl. mort. 68, 86; do. Iowa div. 1st, 90; Alabama, Class A, 78; Arkansas 78, L. R., B. P. & N. O., 28; Missouri 68, 1886, 108; do. 68, 1889-90, 111; Mutual Union Telegraph, 27½; do. 68, 78; South Carolina 68, non-fund., 7½; Tennessee 68, 54½; do. Compromise bonds, 64; Colorado Coal and Iron, 43; New Central Coal, 22; Standard Mining Company, 7½; Suto Tunnel, 0.50.

**Boston.**—Atchison, Topeka and Santa Fe guar., 114½; do. plain 58, 89; Atlantic and Pacific blocks, 106; do. 68, inc., 26½; Boston Land Co., 7½; Burlington and Missouri River in Neb. 68, non-exempt, 103; Connecticut River R. pref., 160; Chicago, Milwaukee and St. Paul, Dubuque div. 68, 103½; Chicago, Burlington and Quincy 48, old, 85½; do. Denver ext. 48, 84½; California Southern, 20; do. 68, 181; Chesapeake 68, 109; Connecticut and

Passumpsic Rivers pref., 95; Connotton Valley, 7½; do. 68, scrip, 64; do. new 58, 59; Flint and Pere Marquette, 21; do. pref., 94½; Florence, El Dorado and Walnut Valley 78, 107; Fort Scott Branch 78, 110; Iowa Falls and Sioux City, 92½; Kansas City, Ft. Scott and Gulf pref., 125; do. 78, 112; Little Rock and Fort Smith, 53; Marquette, Houghton and Ontonagon, 73; do. pref., 118; Mexican Central, 27; do. blocks No. 2, 119; do. No. 3, 105½; do. 78, 83½; Massachusetts Central, 4½; do. 68, 40; Maine Central, 74; New York and New England 68, 105½; New Mexico and Southern Pacific 78, 114½; Ogdensburg and Lake Champlain consol. 68, 91; Republican Valley 68, 104; Sonora 78, 105; Summit Branch 13; Toledo, Delphos and Burlington, 68, 70; do. Branch inc., 18½; do. Southeast div. 68, 69; Toledo, Cincinnati and St. Louis, 84½; do. 68, 67; Wisconsin Central, 16½; Atlantic Mining, 16; Allouez, 2½; Beaver Run Coal, 7½; Franklin, 16; Huron, 3½; National 2; Osceola, 34; Pewabic, 10½; Sullivan, 2½; Silver Islet, 17.

**Philadelphia.**—American Steamship Co., 20; do. 68, 107½; Buffalo, Pittsburgh and Western pref., 26; Central Transp., 34½; Cincinnati 7-308, J. and J., 131; Camden and Burlington Co. 68, 112; Huntingdon and Broad Top Mt. consol. 58, 93; Norfolk and Western pref., 55½; Nesquehoning Valley, 54½; Philadelphia City 68, 1897, 129; Philadelphia, Wilmington and Baltimore 48, 95; Pennsylvania Canal 68, 93; Philadelphia and Reading R. R. scrip, 100; Philadelphia, Germantown and Norristown, 110½; Pennsylvania and New York Canal 78, 1896, 122½; Shamokin, Hazleton and Wilkesbarre 2d, 25; Texas and Pacific consol. mort. 68, 95; do. Rio Grand div. 68, 86½; United Companies of New Jersey consol. 68, 112; West Chester and Philadelphia consol. 78, 119; Warren and Franklin 78, 112; West Jersey 68, 117. The latest quotations are: City 68, 108@120; do. free of tax, 127@132; do. 48, new, 108@114; Pennsylvania State 58, new loan, 114@116½; do. 48, old, 108@112; do. 48, new, 114@116½; Philadelphia and Reading Railroad, 31½@31½; do. consol. mort. 78, reg., 126@127; do. genl. mort. 68, coupon, 96@97; do. 78, 1893, 121@121½; do. new conv., 75@75½; United New Jersey R. R. and Canal, 190½@191½; Buffalo, Pittsburgh and Western, 21½@22; Pittsburgh, Titusville and Buffalo 78, 94@94½; Camden and Amboy mort. 68, 1889, 113@115; Pennsylvania R. R., 62½@62½; do. general mort. 68, coupon, 124@125; do. reg., 127@129; do. consol. mort. 68, reg., 120@122; Little Schuylkill R. R., 57@58; Schuylkill Navigation pref., 13@13½; do. 68, 1882, 91@92½; Elmira and Williamsport pref., 58@60; do. 58, 100@101; Lehigh Coal and Navigation, 43½@43½; do. 68, 1884, 103@104; do. R. R. loan, 113@116; do. Gold Loan, 113@114; do. consol. 78, 116@117; Northern Pacific, 51½@51½; do. pref., 94½@94½; North Pennsylvania, 65@64; do. 68, 106½@107½; do. 78, 120@123; do. 78, General mort. reg., 122@123; Philadelphia and Erie, 19½@20; do. 78, 113½@115; do. 58, 104@105; Minehill, 61½@62; Catawissa 23½@24½; do. pref., 55@55½; do. new pref., 54@54½; do. 78, 1900, 120@—; Lehigh Valley, 62@62½; do. 68, coupon, 122@123; do. reg., 122½@123; do. 78, 131½@132½; do. consol. mort., 121@122; Fifth and Sixth streets (horse), 160@161; Second and Third, 112@114; Thirteenth and Fifteenth, 70@75; Spruce and Pine, 40@45; Green and Coates, 80@90; Chestnut and Walnut, 90@93; Germantown, 70@75; Union, 109@110; West Philadelphia, 105@115; People's 16½@17½; Continental, 103@105.

**Baltimore.**—Atlantic Coal, 1.20; Baltimore City 68, 1890, 116; do. 68, 1884, 104; do. 68, 1886, 109½; do. 68, 1900, 125½; do. 58, 1916, 125; do. 58, 1894, 115; Charlotte, Columbia and Augusta, 55; Canton Co. 68, 102½; Chesapeake and Ohio Canal 68, 35; Maryland 68, exempt, 110; Marietta and Cincinnati 1st Trust certificates, 128; do. 2d do., 101½; do. 3d do., 56½; Norfolk Water 58, 135; Northern Central 58, series A, 97½; do. B, 97½; Ohio and Mississippi, Springfield div. 1st, 121½; Philadelphia, Wilmington and Baltimore, 41; Suto Tunnel, 0.50; Union R. R. 68, end. by Canton Co., 116½; Virginia Midland 2d mort., 111; do. 5th mort., 95; Virginia Peleers, 36; Virginia 10-40 coupons, 66. The latest quotations are: Atlanta and Charlotte, 73@74; do. 1st, 108½@109½; Baltimore and Ohio, 194@195; do. 68, 1885, 107@—; Baltimore City 68, 1886, 108½@109; do. 68, 1890, 116@—; do. 58, 1894, 114½@115½; do. 58, 1916, 125@125½; do. 48, 1920, 110@—; Baltimore City Passenger Railway, 41@42; Columbia and Greenville 1st, —@102; Canton Co. 68, 102½@102½; Marietta and Cincinnati 1st, 127½@128½; do. 2d, 100½@100½; do. 3d, 56½@57; Northern Central, —@54½; do. 68, 1900, gold, 116½

@116½; do. 68, 1904, gold, 114@115½; do. 58, Series A, 97@97½; do. B, —@97½; North Carolina, 48, 79½@80; Norfolk and Western pref., 53½@56; Ohio and Mississippi, Springfield div. 68, 120½@121; Richmond and Danville, 68, 1890, 99½@100; Virginia Midland 5th mort., 94½@95; do. inc., 70@75; Virginia consols. 60½@60½; do. 10-40s, 43½@43½; Virginia and Tennessee 68, 2d, 101½@102.

### The Coal Trade.

THE leading coal-carrying companies make the following reports of their tonnage for the week ending August 26, and for the year to that date, compared with their respective amounts carried to the same time last year:—

	Week.	1882.	1881.
Reading Railroad.....	199,116	5,787,108	5,540,665
Schuylkill Canal.....	21,905	276,898	355,527
Lehigh Valley.....	134,578	4,444,229	4,044,934
Delaware, Lackawanna and Western.....	110,062	2,852,134	2,677,747
Shamokin.....	29,279	712,283	692,394
Central R. R. of New Jersey..	87,250	2,700,000	2,514,000
United R. R. of New Jersey...	35,561	1,085,713	846,880
Pennsylvania Coal.....	26,122	862,617	846,527
Delaware and Hudson Canal.	82,183	2,180,134	2,255,464
Huntingdon and Broad Top Mountain.....	5,840	266,714	322,296
Penn. and New York.....	24,086	1,047,316	1,062,372
Clearfield, Pa.....	64,107	1,866,690	1,569,613

The total tonnage of anthracite coal from all the regions for the week ending Aug. 26, as reported by the several carrying companies, amounted to 668,913 tons, against 620,997 tons in the corresponding week last year, an increase of 47,916 tons. The total amount of anthracite mined for the year is 17,884,171 tons, against 17,192,006 tons for the same period last year, an increase of 692,165 tons. The quantity of bituminous coal sent to market for the week amounted to 80,732 tons, against 94,250 tons in the corresponding week last year, a decrease of 13,518 tons. The total amount of bituminous mined for the year is 2,671,846 tons, against 3,171,256 tons for the corresponding period last year, a decrease of 499,410 tons. The total tonnage of all kinds of coal for the week is 749,645 tons, against 715,247 tons in corresponding week last year, an increase of 34,398 tons, and the total tonnage for the coal year is 20,556,017 tons, against 20,363,262 tons to same date last year, an increase of 192,755 tons. The quantity of coal and coke carried over the Pennsylvania Railroad for the week ending August 26 was 211,913 tons, of which 164,496 tons were coal and 47,417 tons coke. The total tonnage for the year thus far has been 7,100,526 tons, of which 5,231,747 tons were coal and 1,877,779 tons coke. These figures embrace all the coal and coke carried over the road, east and west. The shipments of bituminous coal from the mines of the Cumberland coal region for the week ended Aug. 26 were 18,684 tons, and for the year to that date 628,463 tons, a decrease of 697,787 tons as compared with the corresponding period of last year. The shipments were: To the Baltimore and Ohio Railroad—For the week, 12,544 tons; year, 517,655 tons; decrease as compared with 1881, 339,552 tons. Chesapeake and Ohio Canal—Week, 4,284 tons; year, 30,278 tons; decrease as compared with 1881, 266,570 tons. Pennsylvania Railroad—Week, 180 tons; year, 76,642 tons; decrease from last year, 94,767 tons. The Reading Railroad shipment for last week, ending September 2, was about 130,000 tons, of which 32,000 tons were sent to and 53,500 tons shipped from Port Richmond, and 8,600 tons sent to and 9,800 tons shipped from Elizabethport.—*Philadelphia Ledger, Sept. 4.*

THE Grand Jury of the Criminal Court, Baltimore, Md., previous to their retirement to their room for the transaction of business, were addressed by the Judge in reference to the blowing of steam whistles in East Baltimore. He spoke of the great annoyance to the residents of that and other sections of the city by the unnecessary and continuous blowing of the whistles connected with steam-engines in the factories and also on steam-tugs. He invoked their attention to the subject, that a remedy might be applied so as to abate the nuisance complained of. The foreman stated that he and his associates would take the subject into consideration.



## GORDON & DUGGAN RAILWAY SWITCH.

The **Standard** on several and in use on twenty-five Railroads.

Combines Safety, Durability, Simplicity, and Low Cost, with **Fixed Rails.**

The only movable piece weighs 375 lbs., and is without a bolt or rivet.

**E. GORDON, Treasurer,**  
No. 28 STATE STREET, BOSTON, MASS.

## FOR SALE.

Locomotives—Five Second-hand Narrow Gauge Engines in good order.

One Second-hand "Tank" Narrow Gauge Engine, 10 tons.

Several Second-hand Standard Gauge Locomotives in good order, immediate delivery.

One new 3ft. Gauge Passenger Engine, 22 tons, prompt delivery.

Six new 4ft. 8½ Gauge Locomotives, cylinders 17x24, weight 35 tons. August and September delivery.

One new 3ft. Gauge Saddle Tank Engine, delivery this month.

Cars—Passenger and Freight Cars of all descriptions for early delivery.

Three Second-hand Passenger Coaches in good order.

Rails—16lb., 30lb. and 56lb. Rails in store.

Car Wheels and Axles.

Narrow-Gauge Rolling-stock a specialty.

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84 Broadway,  
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## McCANN'S EXCELSIOR SELF CAR COUPLING.

Patented August 3, 1880.

For Durability, Simplicity, and Practicability

IT HAS NO EQUAL

**MARION W. McCANN,**  
Patentee and Proprietor,  
DUBLIN, IND.

## Continuous Automatic FREIGHT BRAKES.

Requiring no other Connection  
between Cars than the or-  
dinary Coupling-Link  
and Pin.

SIMPLE, DURABLE, AND EFFICIENT.

Brakes can be applied to every Car in the longest train, from the engine or caboose, or from any car in the train. It can be readily attached to any car, and adapted to ordinary brake beams, shoes, etc. There is no possibility of damaging wheels by "sliding."

PATENTED MAY 23, 1882.

Railroad and manufacturing companies, or parties able to co-operate with patentee in their manufacture and introduction, are invited to correspond with

**WM. C. SCHULTZE,**  
Surgeon C., R. I. and P. Ry.  
MARION, Iowa Co., Iowa.

# NO OTHER LINE IS SUPERIOR TO THE FITCHBURG RAILROAD HOOSAC TUNNEL ROUTE WEST.

## 6.30 A. M. ACCOMMODATION.

Connecting at Syracuse, N. Y., at 7.15 P.M., with through sleeping cars for Cincinnati, Cleveland, Toledo, **DETROIT AND CHICAGO.**

## 3.00 P. M. CINCINNATI EXPRESS.

Pullman Sleeping Car attached, running through to Cincinnati without change. (Only Line running Pullman Cars from Boston.) This car runs *via* Erie Railway and N.Y., P. & O. R.R., making direct connection for Louisville, St. Louis, Kansas City, New Orleans, and all points in Texas and New Mexico.

## 3.00 P. M. ST. LOUIS EXPRESS.

THE ONLY LINE which runs a THROUGH SLEEPING-CAR from

## BOSTON TO ST. LOUIS WITHOUT CHANGE!

ARRIVING AT 8.00 A.M. SECOND MORNING.

Through sleeping car for Buffalo, Toledo, Fort Wayne, Logansport, Lafayette, Danville, Tolono, Decatur and St. Louis, making direct connection with through Express Trains for Kansas, Colorado, Texas, and all points in the

## SOUTHWEST.

## 6.00 P. M. PACIFIC EXPRESS.

The only line running a through sleeping car *via* Buffalo and Detroit without change, arriving at Chicago at 8.00 A.M. second morning, making sure connections with through Express Trains for Iowa, Nebraska, Kansas, Colorado, the Pacific Coast, Wisconsin, Minnesota and all points in the

## WEST AND NORTHWEST.

THE ABOVE TRAINS RUN DAILY, SUNDAYS EXCEPTED.

This Great Short Line passes through the most celebrated scenery in the country, including the famous HOOSAC TUNNEL, four and three-quarters miles long, being the longest Tunnel in America, and the third longest in the world.

Tickets, Drawing-Room and Sleeping-Car Accommodations may be secured in Advance by Applying to or Addressing

**250 WASHINGTON STREET, BOSTON. 250**

**JOHN ADAMS, General Superintendent. F. O. HEALD, Acting en'l Passenger and Ticket Agent.**

In effect January 9th, 1882, and subject to changes.

## RAILROAD AND CANAL DIVIDEND STATEMENT.

Showing the amount of Stock Outstanding, the Dividend Periods and the date of last Dividend.

Marked thus (*) are leased roads.	Stock outstanding.	Divide'd Periods.	Last Dividend Payable.	Marked thus (*) are leased roads.	Stock outstanding.	Divide'd Periods.	Last Dividend Payable.	Marked thus (*) are leased roads.	Stock outstanding.	Divide'd Periods.	Last Dividend Payable.
Albany and Susq*.....100	2,500,000	semi-an	July '82 2	Little Miami.....50	4,637,300	q'arterly	June '82 2	Ware River*.....100	750,000	semi-an.	July '82 3 1/2
Ashuelot.....100	210,000	q'arterly	Oct. '81 3 1/2	Little Rock & Ft. S.....100	4,096,135	.....	July '81 10 8	Warren (N. J.).....100	1,800,000	semi-an.	Apl. '82 3 1/2
Atch., Top. and S. Feo.....100	54,000,000	q'arterly	Aug. '82 1 1/2	Little Schuylkill*.....50	2,646,100	semi-an.	July '82 3 1/2	Warwick Valley.....100	340,000	semi-an.	July '82 2 1/2
Atlanta and W. Point.....100	1,232,200	semi-an	Jan. '82 6	Louisville & Nashv.....100	19,310,913	semi-an.	Feb. '82 3	Westchester & Phil. pref.....100	821,300	semi-an.	July '82 2
Atlantic and St. Law*.....100	5,840,000	semi-an	Mar. '82 3	Lowell & Andover.....100	500,000	semi-an.	Jan. '82 3 1/2	West Jersey.....100	1,359,750	semi-an.	Sept. '82 3
Augusta and Savan*.....100	1,022,900	semi-an	June '81 3 1/2	Lykens Valley.....100	600,000	q'arterly	Oct. '81 2 1/2	Wilmington & Weld*.....100	1,456,200	semi-an.	July '82 3
Avon, Genesee & Mt. M*.....100	225,000	semi-an	July '81 3	Manchester & Law.....100	1,000,000	semi-an.	May '82 5	Will., Col., & South.....100	960,000	semi-an.	July '82 3
Baltimore and Ohio.....100	14,792,566	semi-an	May '82 5	Manhattan.....100	13,000,000	.....	.....	Winchester & Poto*.....100	180,000	semi-an.	July '82 3
" " pref.....100	5,000,000	semi-an	July '82 3	" " 1st pref.....100	6,500,000	q'arterly	July '82 1 1/2	Winchester & Strasb*.....100	74,700	semi-an.	July '82 3
Berkshire*.....100	600,000	semi-an	Apl. '82 5	" " 2d pref.....100	6,500,000	q'arterly	July '82 1 1/2	Worcester & Nashua.....75	1,789,800	semi-an.	July '82 1 1/2
Boston and Albany.....100	20,000,000	q'arterly	Sept. '82 2	Marietta & Cincinnati.....50	1,386,350	.....	.....	HORSE-POWER R. R.			
Bos. & N. Y. Air Line pf.....100	2,795,227	q'arterly	June '82 1	" " 1st pref.....100	8,105,600	semi-an.	Sept. '66 38	Albany City.....100	200,000	annual	.....'82 5 1/2
Bos., Cl., F. & N. B. pref.....100	1,750,100	.....	Apl. '82 3 1/2	" " 2d pref.....50	4,440,000	semi-an.	Sept. '66 38	Baltimore City.....25	1,000,000	semi-an.	July '82 3
Bos., Conc. & Mont. pf.....100	800,000	semi-an	May '82 3	Marq. Hout. & Ont. pf.....100	2,259,026	.....	Aug. '82 4	Balt., Cat. & El. Mills.....100	.....	semi-an.	July '82 2
Boston and Lowell.....500	3,940,000	semi-an	July '82 2	Massachusetts.....100	400,000	semi-an.	Aug. '82 3	Bleeker St. & Ful. Fy.....100	900,000	semi-an.	July '81 1/2
Boston and Lowell.....500	3,940,000	semi-an	July '82 2	Michigan Central.....100	18,738,204	q'arterly	Aug. '81 1	Boston & Chelsea pref.....50	110,000	semi-an.	Apl. '82 3
Boston and Providence.....100	6,921,274	semi-an	May '82 4	Middlesex Central.....100	3,022,517	semi-an.	Aug. '82 3	Broadway (Brooklyn).....100	250,000	q'arterly	Oct. '81 3
Boston & Providence.....100	4,000,000	semi-an	May '82 4	Mill Creek & Minehill*.....50	323,000	semi-an.	July '82 5	B'way & 7th Av. (N. Y.).....100	2,100,000	q'arterly	Oct. '81 2
Attleborough.....100	131,700	semi-an	July '82 3 1/2	M. Hill & Schuyl. Hav*.....50	4,022,500	semi-an.	July '82 3 1/2	B'klyn & Hunter's Pt.....100	400,000	semi-an.	Apl. '79 3
Bos., Revere B. & Lynn.....100	419,400	semi-an	July '82 3 1/2	Missouri Pacific.....100	28,169,800	q'arterly	July '82 1 1/2	Brooklyn City.....100	2,000,000	q'arterly	Dec. '81 3 1/2
Buffalo, N. Y. & Erie*.....100	950,000	semi-an	June '82 3	Mobile & Montgomery.....100	3,022,517	semi-an.	Feb. '82 3 1/2	Bushwick (Brooklyn).....100	300,000	semi-an.	July '81 2 1/2
Camden & Atlantic.....50	377,400	q'arterly	Apl. '80 3 1/2	Mont. & Wells Rivers.....100	800,000	annual	Feb. '80 2	Cambridge.....100	908,000	q'arterly	Apl. '81 4 1/2
" " pref.....50	880,650	semi-an	July '82 3 1/2	Morris and Essex.....50	15,000,000	semi-an.	July '82 6	Can. Park, N. & E. Riv.....100	1,800,000	q'arterly	July '82 2
Camden & Burl. Co.....100	381,925	semi-an	July '82 3	Mt. Carbon & P. Carrol.....100	282,350	semi-an.	July '82 6	Christophers & Tenth St.....100	650,000	semi-an.	Aug. '81 2 1/2
Canada Southern.....100	15,000,000	.....	Feb. '81 2 1/2	Nashua and Lowell.....100	800,000	semi-an.	July '82 4	Citizens (Phil.).....50	192,500	q'arterly	Jan. '82 3 1/2
Cape May & Millville.....50	447,000	semi-an	June '81 3	Nashua & Rochester.....100	1,305,800	semi-an.	Aug. '82 1 1/2	Citizens (Phg.).....50	200,000	annual.	.....'80 1 1/2
Catawissa*.....50	1,159,500	annual	Oct. '81 1 1/2	Nashua & Decatur.....100	1,227,000	semi-an.	June '81 3	Coney Island & Bklyn.....100	500,000	semi-an.	Oct. '80 5
" " pref.....50	2,200,000	semi-an	May '82 3 1/2	Nash., Chat. & St. Louis.....25	6,670,325	semi-an.	Apl. '82 1 1/2	Continental (Ph.).....50	580,000	semi-an.	July '82 6
Cayuga and Susq*.....50	589,110	semi-an	July '81 4 1/2	Naugatuck.....100	2,000,000	semi-an.	July '82 5	D. Dock, E. B. Way & Batco.....100	1,200,000	q'arterly	Nov. '81 4
Cedar Rapids & Mo. R*.....100	6,850,400	q'arterly	Aug. '82 1 1/2	Neaquehoning Val'y*.....50	1,300,000	semi-an.	Sept. '82 3	Elginth Av. (N. Y.).....100	1,000,000	q'arterly	Oct. '81 3
" " pref.....100	769,600	semi-an	Aug. '82 3 1/2	N. Castle & Beaver Val*.....50	600,000	q'arterly	Oct. '81 1	42d St. & G. St. Ferry.....100	747,000	semi-an.	Nov. '81 6
Central of Georgia.....100	18,563,000	q'arterly	June '82 4	New London North*.....100	1,500,000	q'arterly	July '82 1 1/2	Frankf. & Southw (Ph).....50	600,000	q'arterly	Jan. '82 6
Central of New Jersey.....100	18,563,000	q'arterly	July '76 2 1/2	N. Y. Cen. & Hud. R.....100	89,428,330	q'arterly	July '82 2	Germantown, (Ph.).....50	572,800	q'arterly	July '82 2 1/2
Central Ohio*.....50	2,437,950	semi-an	July '82 3	N. Y. and Harlem.....100	7,950,000	q'arterly	July '82 4	Girard College (Ph.).....50	500,000	semi-an.	July '71 3
" " pref.....50	411,550	semi-an	July '82 3	" " pref.....100	1,500,000	q'arterly	July '82 4	Grand St. & Newton.....100	170,091	semi-an.	July '81 2 1/2
Central Pacific.....100	59,275,500	semi-an	Aug. '82 3	" " City Line.....100	77,083,000	.....	Apl. '82 3	Green & Coates St. (Ph).....50	150,000	q'arterly	July '82 3
Chemung*.....100	380,000	q'arterly	July '81 1 1/2	N. Y. Lake Erie & West.....100	77,083,000	.....	Jan. '82 6	Heston, Mantauk & F'm.....50	299,381	semi-an.	Jan. '75 4
Chesapeake preferred.....100	2,155,300	semi-an	July '82 1 1/2	" " pref.....100	8,156,825	semi-an.	Jan. '82 5	Highland.....100	600,000	semi-an.	July '82 4
Chicago and Alton.....100	11,181,741	semi-an	Sept. '82 4	N. Y., N. H. & Hart.....100	15,500,000	q'arterly	Jan. '82 5	Lomb. & South Sts (Ph).....25	195,000	semi-an.	Oct. '75 4
" " pref.....100	2,245,400	semi-an	Sept. '82 4	N. Y., Prov. & Boston.....100	3,000,000	q'arterly	Aug. '82 2	Lynn and Boston.....100	200,000	semi-an.	May '82 4
Chi., Burl. & Quincy.....100	55,337,455	q'arterly	Sept. '82 4	Niag. Bridge & Canad*.....100	1,000,000	semi-an.	Sept. '81 3	Malden and Melrose.....100	165,000	.....	.....
Chi., Iowa & Nebras*.....100	3,916,200	semi-an	July '82 4	North Carolina*.....100	1,000,000	semi-an.	May '81 4	Metropolitan (Bost.).....50	1,500,000	semi-an.	July '82 4
Chi., Mil. & St. Paul.....100	20,404,261	semi-an	Oct. '82 3 1/2	" " pref.....100	86,000	semi-an.	May '81 4	Middlesex (Boston).....100	650,000	semi-an.	May '82 3 1/2
" " pref.....100	14,401,483	semi-an	Oct. '82 3 1/2	N. Eastern (S. C.) pref.....100	86,000	semi-an.	May '81 4	N. Y. Bay Ridge & Jam.....100	150,000	.....	Oct. '78 7
Chi. & N. Western.....100	14,988,257	semi-an	June '82 3 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Ninth Av. (N. Y.).....100	797,320	.....	.....
" " pref.....100	21,525,353	q'arterly	Sept. '82 2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Orange & Newark.....100	282,555	.....	.....
Chi., R. I. & Pacific.....100	41,960,000	q'arterly	Aug. '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	People's (Phila.) pref.....25	124,744	.....	July '82 2
Chi. & West Mich.....100	6,151,000	semi-an	Feb. '82 2 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Philadelphia City.....50	475,000	semi-an.	July '82 4
Chi., St. P. & M. O. pref.....100	10,390,000	q'arterly	July '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Phila. and Darby.....20	200,000	semi-an.	July '81 3 1/2
C. Ind., St. L. & Chi.....100	6,000,000	q'arterly	July '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Phila. & Grey's Ferry.....50	308,000	semi-an.	Jan. '82 6
Cin., Sand. & Cleve pf.....50	429,037	semi-an	May '82 3	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Phg. Alleg. & Manches.....50	300,000	q'arterly	Oct. '81 3
Clev. and Mahoning*.....50	3,750,200	semi-an	Nov. '81 3 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Ridge Avenue (Ph.).....50	420,000	semi-an.	Oct. '81 11
Clev. and Pittsburg*.....50	11,244,330	q'arterly	Sept. '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Second Avenue (N. Y.).....100	1,199,500	semi-an.	July '81 2 1/2
Columbus & Xenia*.....50	1,780,200	q'arterly	June '82 2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Second & Third St. (Ph).....50	771,076	q'arterly	Jan. '82 4 1/2
Colum. & Hocking Val.....100	2,500,800	semi-an	Aug. '81 208	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	17th & 19th Sts (Ph.).....50	250,000	q'arterly	Jan. '81 3
Concord.....100	1,500,000	semi-an	May '82 5	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Sixth Avenue (N. Y.).....100	750,000	semi-an.	Oct. '81 5
Concord and Ports*.....100	350,000	semi-an	July '82 3 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Somerville (Boston).....100	113,000	semi-an.	May '82 3
Conn. & Passump. Riv.....100	2,244,400	semi-an	Aug. '82 3	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	South Boston.....50	600,000	semi-an.	July '82 4
Connecticut River.....100	2,100,000	semi-an	July '82 4	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Third Avenue, N. Y.....100	2,000,000	q'arterly	Nov. '81 5
Cumberland Valley.....50	1,292,950	q'arterly	July '82 2 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	13th and 16th Sts, Ph.....50	334,529	q'arterly	Jan. '82 4
" " 1st pref.....50	241,900	semi-an	Apl. '82 4	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	23d street, N. Y.....100	600,000	semi-an.	Aug. '81 4
" " 2d pref.....50	243,000	semi-an	Apl. '82 4	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Union, Boston.....100	374,300	semi-an.	Jan. '82 4
Danbury & Norwalk.....50	600,000	.....	Apl. '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Union, Phila.....50	1,005,000	semi-an.	Jan. '82 7
Dayton and Mich*.....50	2,402,573	semi-an	Apl. '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	West Philadelphia.....50	750,000	semi-an.	July '77 10
" " pref.....50	1,211,250	q'arterly	July '82 2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	CANALS.			
Delaware*.....25	1,468,940	semi-an	July '82 3	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Chesapeake and Dela.....50	2,078,038	semi-an.	June '75 2
Del. & Bound Brook*.....100	1,652,000	q'arterly	Aug. '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Delaware Division.....50	1,633,350	semi-an.	Aug. '82 1 1/2
Del., Lack. & Western.....100	26,200,000	q'arterly	July '82 2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Delaware and Hudson.....100	20,000,000	q'arterly	Sept. '82 1 1/2
Denver & Rio Grande.....100	29,160,000	q'arterly	Jan. '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Delaware & Raritan*.....100	5,847,400	q'arterly	July '82 2 1/2
Det., South P. & Pac.....100	3,500,000	.....	Aug. '80 4	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Lehigh Coal and Nav.....50	11,204,250	semi-an.	June '82 2
Detroit, Lana. & Nor.....100	1,825,600	semi-an	Aug. '80 2 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Monongahela Nav.....50	1,004,500	semi-an.	July '82 3 1/2
" " pref.....100	2,503,380	semi-an	Aug. '82 3 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Morris, consolidated.....100	1,025,000	semi-an.	Feb. '81 2
Dubuque & Sioux C'y*.....100	5,000,000	semi-an	Apl. '82 3	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	" " preferred.....100	1,175,000	semi-an.	Feb. '81 5
East Pennsylvania*.....50	1,709,550	semi-an	July '82 3	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Pennsylvania.....50	4,501,200	.....	.....
East Mahanoy*.....50	392,950	semi-an	July '82 3	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Schuyl. Nav., com.*.....50	859,100	annual.	An. '81 50 1/2
Eastern (N. H.).....100	492,500	q'arterly	June '82 2 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	" " pref.....50	3,200,000	annual.	Aug. '81 1 1/2
El River.....100	3,000,000	semi-an	Sept. '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	MISCELLANEOUS.			
Elmira, Jef. & Canand*.....100	500,000	annual	Sept. '80 5	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	Adams Express.....100	12,000,000	q'arterly	Sept. '82 2
Elmira & Williams*.....100	500,000	semi-an	May '82 1 1/2	Norfolk & Western pref.....100	15,000,000	q'arterly	Sept. '82 1	American Express.....50	1,833,350	semi-an.	July '82 3
" " pref.....50	500,000	semi-an	July '82 3								



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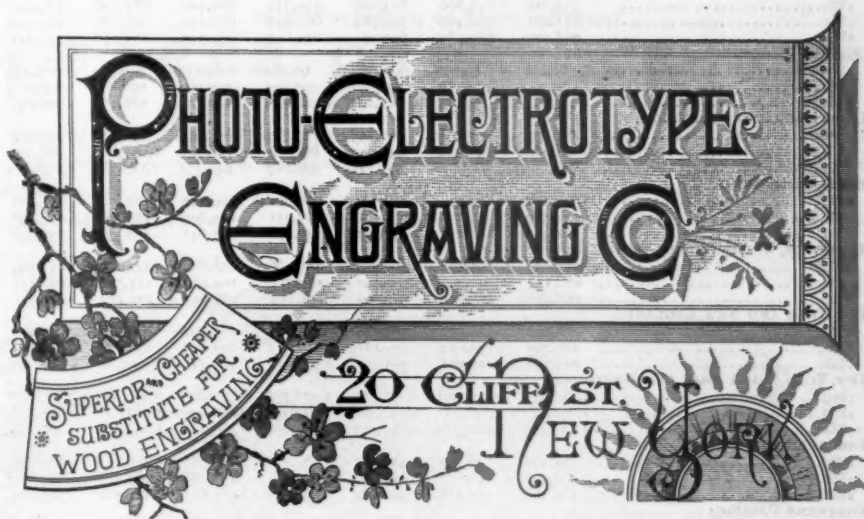
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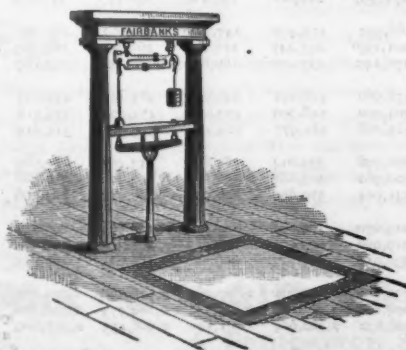
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## RAILROAD EARNINGS—MONTHLY.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
<b>BURL., CEDAR RAP. &amp; NORTHERN:</b>													
1880.....	184,316	165,170	188,325	141,652	149,504	153,378	143,432	160,160	179,804	204,991	189,330	193,419	2,053,484
1881.....	167,790	124,510	148,554	184,680	165,630	205,912	174,351	209,112	221,801	221,748	203,880	232,812	2,259,037
1882.....	252,823	225,631	224,107	176,304	157,278	211,257	198,76	.....	.....	.....	.....	.....	.....
<b>CENTRAL PACIFIC:</b>													
1880.....	1,200,614	1,070,487	1,373,438	1,356,716	1,778,488	1,724,990	1,840,067	1,973,438	1,964,997	1,120,229	2,199,466	1,905,221	20,508,112
1881.....	1,260,907	1,454,218	1,709,637	1,872,370	2,091,410	2,159,381	1,899,346	2,059,000	2,293,000	2,514,000	2,267,000	2,110,000	23,947,951
1882.....	1,876,000	1,702,000	1,987,000	2,052,000	2,353,000	2,239,000	2,020,000	.....	.....	.....	.....	.....	.....
<b>CHESAPEAKE AND OHIO:</b>													
1880.....	802,335	108,681	222,762	221,559	199,443	214,352	238,236	259,110	247,303	211,820	240,795	218,000	2,674,308
1881.....	162,540	184,389	228,479	227,343	252,235	241,135	225,096	262,858	247,144	237,303	235,585	203,562	2,700,762
1882.....	209,708	208,981	267,454	255,939	260,753	306,831	.....	.....	.....	.....	.....	.....	.....
<b>CHICAGO AND ALTON:</b>													
1880.....	534,054	497,013	626,473	542,961	616,128	617,524	708,906	761,120	767,349	785,199	696,776	574,695	7,718,198
1881.....	487,890	461,641	529,915	558,190	548,556	635,860	676,205	771,466	768,897	750,359	680,133	635,307	7,553,988
1882.....	579,447	530,480	584,483	561,787	553,412	613,886	671,537	.....	.....	.....	.....	.....	.....
<b>CHICAGO AND NORTHWESTERN:</b>													
1880.....	1,154,632	1,131,683	1,361,725	1,294,573	1,875,608	1,671,177	1,609,686	1,767,938	2,020,245	2,105,217	1,855,671	1,477,902	19,416,007
1881.....	1,240,667	963,208	1,178,795	1,474,612	1,879,006	2,306,040	1,983,031	2,315,164	2,292,676	2,341,097	2,019,037	1,855,476	21,849,209
1882.....	1,471,945	1,696,568	1,674,819	2,058,133	2,058,133	2,058,133	2,058,133	2,058,133	2,058,133	2,058,133	2,058,133	2,058,133	.....
<b>CHICAGO, BURLINGTON AND QUINCY:</b>													
1880.....	1,432,740	1,411,870	1,732,518	1,489,894	1,909,627	1,682,956	1,773,643	1,834,321	1,862,285	1,934,762	1,837,860	1,552,018	20,454,494
1881.....	1,307,948	1,034,821	1,418,149	1,574,371	1,679,455	2,083,803	1,888,558	2,173,945	2,266,981	2,031,001	1,816,133	1,905,490	21,324,150
1882.....	1,658,834	1,457,300	1,566,217	1,530,838	1,505,261	1,437,164	.....	.....	.....	.....	.....	.....	.....
<b>CHICAGO, MILWAUKEE AND ST. PAUL:</b>													
1880.....	704,298	738,749	900,675	871,041	1,134,745	1,037,958	1,026,708	991,297	1,257,677	1,493,620	1,472,037	1,397,308	13,086,119
1881.....	990,847	682,717	916,989	1,259,946	1,538,491	1,720,811	1,568,706	1,678,361	1,645,000	1,590,000	1,569,000	1,555,000	17,025,462
1882.....	1,435,000	1,377,000	1,561,000	1,518,000	1,620,000	1,620,000	1,465,000	1,545,000	.....	.....	.....	.....	.....
<b>CHICAGO, ST. PAUL, MINNEAPOLIS AND OMAHA:</b>													
1880.....	193,827	173,078	259,783	259,208	232,146	218,093	236,995	251,013	300,833	342,052	342,894	312,173	3,122,097
1881.....	257,786	158,594	251,648	261,211	350,124	404,562	383,202	385,886	363,685	382,714	380,733	391,950	3,981,296
1882.....	307,498	315,100	405,779	350,558	406,420	363,109	331,480	394,556	.....	.....	.....	.....	.....
<b>CINCINNATI, INDIANAPOLIS, ST. LOUIS AND CHICAGO:</b>													
1880.....	155,697	172,541	198,220	168,199	186,995	200,332	204,138	233,478	343,627	239,881	209,014	198,254	2,412,185
1881.....	182,523	171,511	191,005	183,710	191,005	192,200	177,161	229,858	219,977	212,606	194,805	192,623	2,296,916
1882.....	200,042	186,879	208,066	204,269	199,110	195,948	209,564	.....	.....	.....	.....	.....	.....
<b>DENVER AND RIO GRANDE:</b>													
1880.....	124,759	126,922	160,883	164,882	193,925	295,455	373,132	400,133	406,583	473,318	408,562	349,196	3,478,007
1881.....	307,476	317,681	398,493	433,111	514,767	584,230	548,284	606,193	620,643	665,686	566,819	643,417	6,206,812
1882.....	491,514	412,987	535,055	559,917	614,298	573,462	495,797	574,040	.....	.....	.....	.....	.....
<b>HANNIBAL AND ST. JOSEPH:</b>													
1880.....	176,079	166,065	216,061	206,735	191,317	179,396	224,312	238,081	233,448	242,214	207,147	279,635	2,561,366
1881.....	154,401	122,874	176,356	190,812	172,950	190,740	201,899	215,308	202,567	313,433	201,782	180,376	2,230,961
1882.....	154,717	154,717	168,798	148,913	154,917	155,030	184,347	.....	.....	.....	.....	.....	.....
<b>ILLINOIS CENTRAL:</b>													
1880.....	595,212	613,806	613,008	535,732	665,120	681,736	724,095	732,755	806,836	880,211	783,120	673,182	8,304,812
1881.....	631,281	524,499	557,789	662,493	673,259	803,887	720,004	868,407	828,847	815,238	737,218	763,475	8,586,397
1882.....	728,173	689,387	695,371	674,603	674,749	663,746	752,251	.....	.....	.....	.....	.....	.....
<b>INDIANA, BLOOMINGTON AND WESTERN:</b>													
1880.....	80,498	80,690	116,185	90,374	85,733	106,954	103,438	116,732	110,622	121,343	96,621	104,619	1,233,079
1881.....	90,283	83,261	192,085	203,677	200,064	199,846	199,125	117,956	195,307	181,674	160,826	156,697	.....
1882.....	195,824	175,755	206,235	205,934	182,554	186,133	200,072	.....	.....	.....	.....	.....	.....
<b>LOUISVILLE AND NASHVILLE:</b>													
1880.....	674,455	575,035	612,593	563,883	655,014	976,229	772,537	827,088	931,910	1,000,326	953,086	949,184	9,491,246
1881.....	816,960	805,124	947,959	850,862	828,726	1,227,885	817,135	876,192	951,566	1,002,950	1,005,223	1,122,285	11,326,859
1882.....	950,065	960,036	1,073,745	950,007	946,435	1,187,385	1,038,385	.....	.....	.....	.....	.....	.....
<b>MOBILE AND OHIO:</b>													
1880.....	250,116	204,094	168,301	149,091	129,249	121,855	131,621	140,593	184,246	264,714	251,368	287,373	2,373,621
1881.....	224,347	216,768	230,916	163,551	145,803	136,517	135,542	60,789	209,044	252,921	252,434	262,025	2,406,437
1882.....	161,433	158,154	152,651	145,272	137,645	132,572	136,398	140,443	.....	.....	.....	.....	.....
<b>NASHVILLE, CHATTANOOGA AND ST. LOUIS:</b>													
1880.....	305,633	191,154	169,457	158,839	144,155	151,594	169,326	167,473	178,266	182,087	175,966	2,049,484	.....
1881.....	178,143	190,866	207,710	183,525	104,430	154,549	150,430	168,317	179,979	172,121	152,059	173,127	2,075,256
1882.....	156,994	159,961	161,005	154,155	137,645	119,074	160,991	.....	.....	.....	.....	.....	.....
<b>NEW YORK AND NEW ENGLAND:</b>													
1880.....	164,232	149,907	183,845	179,689	183,701	219,891	205,056	249,885	235,642	215,491	210,856	198,108	2,396,302
1881.....	189,749	173,614	212,019	216,913	217,185	231,518	246,821	280,584	299,573	261,199	242,412	237,729	2,809,255
1882.....	213,840	217,261	265,222	263,544	283,244	290,060	308,920	353,726	.....	.....	.....	.....	.....
<b>NEW YORK, LAKE ERIE AND WESTERN:</b>													
1880.....	1,447,173	1,207,391	1,356,780	1,372,755	1,350,574	1,230,419	1,273,533	1,450,223	1,492,497	1,713,697	1,515,835	1,398,224	16,509,127
1881.....	1,296,381	1,252,218	1,644,958	1,643,151	1,592,544	1,661,812	1,580,976	1,606,874	1,786,417	1,899,910	1,799,338	1,726,788	19,149,361
1882.....	1,443,437	1,425,765	1,847,261	1,799,057	1,776,891	1,794,982	1,787,081	1,772,895	1,734,200	.....	.....	.....	.....
<b>NORTHERN CENTRAL:</b>													
1880.....	334,494	330,860	415,325	386,130	329,788	419,193	450,298	453,923	464,093	512,918	459,054	494,310	5,050,387
1881.....	380,157	382,657	452,906	467,273	465,588	487,287	440,811	498,008	429,505	449,664	467,160	476,622	5,443,697
1882.....	407,368	413,551	430,194	435,129	482,607	482,762	509,683	.....	.....	.....	.....	.....	.....
<b>NORTHERN PACIFIC:</b>													
1880.....	81,390	77,259	119,357	185,700	217,613	253,105	241,277	223,500	330,300	358,456	300,822	269,993	2,629,710
1881.....	116,508	78,803	162,984	216,210	312,705	412,024	404,202	434,085	490,096	505,485	428,903	434,331	4,044,576
1882.....	239,800	269,000	384,000	438,000	568,332	631,342	679,240	727,377	.....	.....	.....	.....	.....
<b>PHILADELPHIA AND ERIE:</b>													
1880.....	224,307	245,372	327,678	334,947	311,470	331,024	308,690	347,532	322,737	367,082	324,066	281,919	3,727,733
1881.....	224,303	225,501	285,573	293,323	343,792	350,585	291,669	303,849	276,522	292,392	284,078	282,772	3,454,309
1882.....	252,727	246,246	265,311	277,851	341,415	341,614	377,206	.....	.....	.....	.....	.....	.....
<b>ST. LOUIS AND SAN FRANCISCO:</b>													



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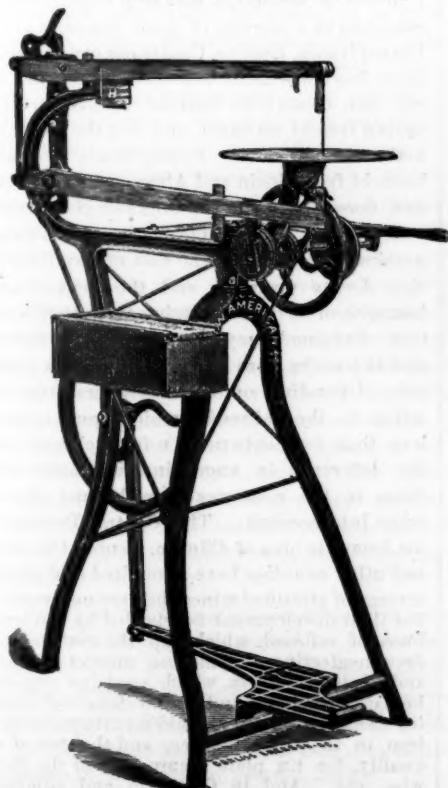
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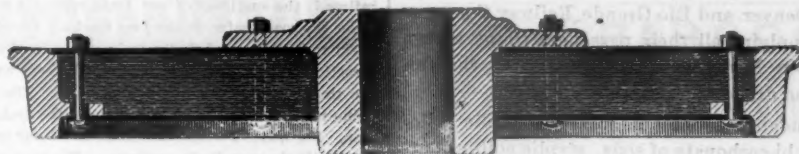
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The company can shortly fill orders to place it on any railroad, and invite communication from Railroad Officials from all parts.

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## CORRESPONDENCE.

[We pay no attention to communications unless the name and address of the writer are given, though the same will not be published if so requested. We assume no responsibility for statements made by correspondents, and we do not necessarily endorse ideas advanced by them. Under these conditions we think it of value to our readers to devote a liberal space to the free discussion by others—whose opinions may be at variance with our own—of subjects pertinent to our department of journalism.]

## Medical and Surgical Supplies on Railroad Trains.

It is a curious circumstance that the new roads in the West are generally the first to adopt the latest improvements and most advanced ideas in railroad matters.

Whether this is due to the superior energy and "go-ahead-iveness" of the typical western man—characteristic of the pioneer in all newly settled regions—I will leave others to determine, but certain it is that it is not necessary to look very far for proofs.

The latest illustration is the recent action of the Denver and Rio Grande Railway Company in supplying all their passenger trains with a "Train Medicine Chest" containing the following drugs and surgical appliances:—

Laudanum, ammonia mixture, styptic colloid, bi-carbonate of soda, styptic cotton, surgical needles, silk, wax, sponges, adhesive plaster, bandages, lint, and scissors. Accompanying these articles is a printed circular, couched in the most concise language consistent with plainness, giving directions as to their use in the case of accident, and advice as to the immediate treatment of such contingencies as bleeding wounds, fractures, dislocations, burns and scalds, frostbite, rupture, fainting, shock, etc., so that in case no physicians are at hand, the cooler or more intelligent train-men or passengers can render immediate assistance and thus save much valuable time. What "crack" "nickle-plated" road in the East has ever thought of making any such provision for the emergencies which are likely to occur at any moment on the "best regulated" railroad, and are occurring daily? This is not the only feature worthy of imitation which this western road presents. It possesses a regularly organized staff of surgeons, whose duty it is to respond to every call from the employes of the road. Printed instructions furnished to the latter direct them that:—

"Whenever an accident occurs on the line, the conductor must immediately telegraph the surgeon in whose charge the injured person is to be placed, in order that time may be given to prepare for the reception of the patient."

The necessity for such provision in case of accident, and for the organization of surgical staffs on all our railroads, is being emphasized every day by the lamentable occurrences which are constantly taking place. The recent catastrophe near Long Branch, caused by the spreading of the rails and the falling of the train into a shallow stream, was followed by the usual delay in procuring assistance for the wounded, and the unfortunately too familiar scenes, which proclaim more forcibly than words the imperative necessity for the adoption of each and every measure which will conduce

to the comfort, safety and health of the traveling public, and to their prompt relief and proper care in the event of disaster.

It is not too much to assert that many valuable lives might be saved at such times, or at any rate much needless suffering, could there be instantly obtained, the means for staunching blood, chloroform and morphine for the relief of pain, bandages, lint, etc. The percentage of deaths resulting from the contingencies of railroad service is sufficiently high. Let everything be done that is within human power to lower that rate. Dr. G. Maxwell Christine, of Philadelphia, in the last number of the *Medical and Surgical Reporter*, relates two instances which have very recently come within his own experience, as "illustrations of the importance of having upon railroad trains and within easy reach certain medicines and appliances in case of accident."

As a corroboration of the truth of my remarks, if such is needed, I transcribe a portion of his article:

"While running at quite a speed, along a prominent railroad, the engineer of our train espied a man lying upon the road, between the two tracks. The night was dark, and it appeared that a train going in the opposite direction had run into this person, who was walking on the track on his way home from work. The accident being unperceived by the train-hands, the train did not stop. For quite a while, therefore, until our train came along, did the man lie in suffering. We were not many miles from the city, and the conductor ordered the man to be taken upon the train and conveyed to the depot. The poor fellow was in terrible agony, and being stout, and the car steps high, it was painful to witness the suffering it caused the man in the attempt to place him in the car. Had the car been supplied with a stretcher, much time and trouble could have been saved, and the man made to feel his wounds less keenly. Somewhat belated, the train rushed along with considerable speed, and with every motion of the car I could see that the jolting gave the man pain. We were obliged to lay him upon the bare baggage car floor, with a chair cushion only under his head.

"Not a drop of medicine or stimulant was obtainable from the train-hands to relieve pain, or to strengthen him until the depot could be reached. Fortunately, however, I had my hypodermic syringe in my pocket, with which I injected into the man's arm a quarter of a grain of morphia, which gave him some ease. The other instance was furnished in the case of the baggage master of a train upon a branch of the same road. While leaning out of the baggage car side door, the baggage master was struck by a projection from a bridge and his skull fractured. I was summoned from the rear end of the train, and soon hastened to where the man lay. Not a thing except ice water was on hand, excepting, too, the whole-souled willingness of all hands to do what they could; but of what avail was all this without the means of keeping up the heart impulse and strength of the patient in hopes of eventually saving his life. I now make it a rule never to travel without my medicine satchel and instruments. On this occasion, they were fortunately with me. The man was pulseless; his heart beat so feebly as hardly to be heard. Another physician happening to be on board, and who ably assisted me in every effort, agreed with me that digitalis must be given the man or he would die before the depot was reached. An injection under the skin was made of a strong tincture of the drug, which I procured from my satchel with the hopeful result of bringing back the pulse and the respiration. Thus we worked with the medicines, etc. I had on hand."

If such precautions are necessary and imperatively demanded on the great thoroughfares of the East, within a few miles of our largest cities, with how much greater emphasis can it be predicated of the lines running through the more sparsely settled regions of the West, where many miles may have to be

traversed and much valuable time lost before it is possible to procure surgical aid. I could relate several instances within my own experience, in which I have been notified by telegraph to be ready to attend a wounded man being brought with all speed from the scene of the accident, and on the arrival of the train found him (a brakeman, a passenger, or perhaps only "a poor old tramp") lying on the floor of the baggage car or the caboose, dead from hemorrhage or shock. In more than one of these cases only a single extremity had been crushed, rendering it reasonably probable that some styptic preparation, applied even by unskillful hands, or the administration of a stimulant, might have kept the vital spark alive until more efficient help could be procured. And yet even here in Central Iowa, along the line of the Chicago, Rock Island and Pacific Railway with towns of five hundred to as many thousand people every six or eight miles, we do not consider ourselves "out West" by any means, whatever you "Down-Easters" may imagine. "The West" is away "out west" of us considerably. It remained for one of these strictly "western" roads, as previously related, to inaugurate measures which, as I have shown, are equally necessitated by the exigencies and emergencies of railroad travel whether East or West.

W. C. S.

Marengo, Iowa, August 20, 1882.

Editor AMERICAN RAILROAD JOURNAL:

DEAR SIR: In your valuable contribution of railway, mine and mill views of the 26th ult., I notice a statement that iron manufacturers complain of a scarcity of good hematite ore in Pennsylvania, naming Center county as having some fine specimens, but stating that they are not rich enough to warrant manufacturers in paying freight on them, and that the best magnetic ores used in Pennsylvania are now brought from Spain and Africa. As the assertion does not name the works or give figures, your readers are unable to form even an approximate estimate of the cost of handling the New Jersey magnetic and the Pennsylvania hematite ores, or of bringing them to this section. Judging by my observations I should say that the works were located by the "tow-path" rule, depending on wagon feeders from the mines to the railroads, which would cost not less than ten cents per ton for each mile; and the difference in wages in this country from those in the countries named must also be taken into account. The Central Pennsylvania hematite ores of Clinton, Center, Clearfield and other counties have a hundred fold greater acreage of stratified mines than are now worked, but their development is retarded by the trunk lines of railroad, which tap the surface-wash ores, neglecting the mining district of Sugar and Nutany valleys, which contains superior hematite ore between the limestone and in paying quantities, certainly yielding fifty per cent of iron in the blast furnace, and that too of A1 quality, for tin plate stamp iron or the finest wire, etc. And in Clearfield and adjoining counties westward we have ores in plenty to cheaply feed several Cambria or Johnstown iron and steel works. What is needed are railroad facilities—the ore is there.

Respectfully yours, JAS. WOLFENDEN,  
Lock Haven, Clinton Co., Penn.  
SEPTEMBER 6, 1882.



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We are amply justified in reducing the price from its old time rate of \$5.00 per year to \$3.00, on account of the numerous indications we are receiving of late of the increased interest that is being taken in the JOURNAL, which warrants us in believing that the sacrifice we make in price will be much more than compensated for by the promised liberal increase in the number of subscribers. It is gratifying to us to know that the alterations made in the Journal during the past year are meeting with such general favor as is expressed in the frequent words of commendation and congratulation sent to us from old and new readers, and we feel called upon to try in every way to merit their approval and to spare no pains to place the paper before as many as possible of those who might derive benefit and profit from it. During its fifty years' experience the JOURNAL has been highly favored by an especially choice class of readers, counting among its subscribers some of the most noted banking houses, commercial bodies, financiers, and railroad men of this country and Europe. Its aim in the future will be to prove itself of more value and interest than ever to its patrons of many years standing, while by its new features it makes itself of service and interest to a broader field and to more varied departments of life and business. We desire to make the JOURNAL as useful and welcome as possible to our readers and advertising patrons, and to this end we hope to have our columns of correspondence, communications and general information full and diversified. The columns we have devoted to general communications have proved especially interesting and popular of late, and we are pleased to have our readers favor this department with suitable contributions.

We give on editorial page our new subscription rates, which are so changed in the belief that it will not only prove acceptable to many who desire to become regular readers of the paper, but that it will meet with the hearty approval of our advertising patrons, who are rapidly filling up the pages offered to them since the improvements in the JOURNAL have been started.

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Under the United States Hotel.

### Boston and New York Travel.

APPROPRIATE of the railroad service of New England, and particularly between Boston and New York, the Philadelphia *Railway World* makes the following comment, which shows that the subject is one open to criticism:—

"New England has not materially grown in the last decade, and while its people sleep their trade is going westward. The census returns for the last twenty years show that while its wealth is increasing, the rate of progress is much slower than that of the adjacent States lying further west. Take its leading trunk line out of New York, the New York, New Haven and Hartford, and Shore Line, running through a series of manufacturing towns and seaside resorts that ought to double their population and business every five or ten years, and yet they are sleeping away their lives under the smothering influence of a second-class road managed without energy or brains.

"Its roadside is strewn with broken granite over its entire length, yet it is ballasted with dirt, and its passengers wrapped in clouds of dust; its trains are run at a rate of speed so slow that they are a disgrace to the age we live in; its wheezy engines strew showers of cinders in their wake; the passenger cars are relics of bygone days, with windows that refuse to open to allow a passenger to enjoy the beautiful panorama stretched along the line, of which the eye would never weary, but it can be seen only through smoke and dirt-begrimed windows; its closets are proper subjects for a board of health; and as a substitute for water-coolers in the cars, dirty boys come through with tin cans and sullen manners at various intervals. Few of the trains have air-brakes; on none are the employes uniformed, and the stations are generally in charge of policemen, who seem to look upon the public as though they were escaped pirates, and treat them accordingly; the crowding and packing of the most people into the fewest cars has been brought down to a science. When an express train going from New York eastward is thinned out by the passengers stopping off at various stations, the brakemen are sent to drive the remaining ones into forward cars, and the rear ones are locked up in order that trainmen can smoke in them, while the first-class passengers are packed like herrings in the narrow seats with low backs and worn-out springs.

"If the men in control of this and other New England roads would waken up and raise the standard of their lines from third or fourth class to first-class affairs, and give the people the accommodations they need and can pay for, New England might share the prosperity that now advances other localities; and it is no exaggeration to suppose that 50,000 families would soon locate along the southern shore of Connecticut, whose heads, doing business in New York and vicinity, are now prevented from enjoying the air and climate which cannot be found except at the points around which the railroads are throwing all the possible barriers to keep out the public, and punish those who venture in in defiance of the wretched accommodations to which they are continually subjected.

"The steamboat men are reaping harvests by furnishing palatial accommodations on their routes parallel to the railroad, the Fall River Line being specially complete in all its appointments; and while they are taking the largest proportion of the travel, although more time is occupied in passing between the competing points, some of the New England railway managers are injuring their own interests and damaging the districts their lines traverse, by habitual neglect and inferior accommodations. None are so blind as those who will not see."

### Another New Motor.

A NEW motor, which the inventor, George V. Sheffield, is confident will supersede steam as a power, was recently on exhibition at 174 Worth street, this city. As described by a reporter, it consists of an air pump, a vacuum reservoir, and a hollow iron cylinder with two rocker valves. The air pump exhausts the air and creates a vacuum in the reservoir. The reservoir is connected with the cylinder by two iron pipes, and by turning a stop-cock in each of these the air is allowed to pour through the valves of the cylinder into the reservoir, and in so doing it causes the wheel to revolve. The amount of the power exerted on the cylinder will depend entirely on the size of the wheel and the valve. The vacuum is created in the machine on exhibition by the application of steam to the air pump, but the inventor expects to apply the rise and fall of the tides to his air pumps, and thus to utilize a natural force in producing his power. By means of floats, to which a system of cog-wheels is to be attached, Mr. Sheffield claims that he can make a series of vacuums in reservoirs at distant points from the rivers, and that the power thus stored can be used at will. In the exhibition of the motor he uses steam to produce the vacuum, and the machine itself works to a charm. If the tides can really be used to supply the force by which vacuums can be created in reservoirs situated in different parts of the City, the new invention will prove a valuable one to its originator.

To shorten the waterway between the West and the Atlantic, two new canals are proposed in Congress. The first contemplates a connection between the Mississippi River and Lake Michigan, by a canal sixty-five miles long, between Rock Island and Hennepin on the Illinois River, there to connect with the existing Illinois and Michigan Canal, to Chicago. The cost of this canal would be close upon \$4,000,000. The second canal is designed to provide a short cut across the State of Michigan, probably from Sengatuck to Detroit, a distance of 178 miles. The proposed course of the canal is along the Kalamazoo River to its head, thence eastward. The number of locks required would be twenty-two. Another line is talked of, running from a point near Chicago through northern Indiana and Ohio to Toledo. The estimated cost of a canal along the first described line is about \$5,555,000. To insure an abundant traffic in grain by water eastward, it is further proposed to make the Erie Canal free.

SAFETY switches of the Tracey patent are being put down at the bridge over the Delaware River at Easton, on the line of the Lehigh Valley Railroad.

THE Bethlehem Iron Company have shipped from the Wallbridge Hematite Mine, in Madoc, Canada, from the 1st of March, 1882, to the 1st of August, 1882, 7,837 tons. The total shipment of the same company this season has been about 15,000.

THE Semaphore system of railway signals has been adopted at the Walpole junction of the New York and New England and Old Colony railroads. The system will supersede the ball signals, but all trains make the customary "know-nothing" stop at present.

THE largest locomotive ever built has just been completed at Paterson, and is one of twenty-five ordered by the Central Pacific Railroad Company. Its weight, without the tender, is sixty-two tons. The cylinders are twenty by thirty inches, and there are eight drivers and a four-wheeled truck.

THERE are few people probably aware that the signal tower of the Pennsylvania Railroad, on the Elevated railroad at Seventeenth and Filbert streets, Philadelphia, controls the passage of more trains within a given period than any other in the world. Even the famous railway junctions in and near London cannot equal the daily record of trains, full and empty, that move past and are controlled by the tower that regulates the traffic of the Broad street station. The *Ledger* is informed that about eleven hundred and forty trains pass that point every twenty-four hours, and yet so accurate is the system and so perfect the control exercised that this enormous traffic moves with thorough safety and without delay or stoppage, through the admirable switch and signal system that has been brought to a marvellous degree of perfection in that tower. The great interlocking switch, which puzzles all laymen who try to study its intricacies, so controls the traffic automatically that it is impossible for the men in charge to set the switches or signals erroneously, as they cannot move the levers when out of the necessary combinations for properly shifting the trains. "Thus," adds the *Ledger*, "we have in our own city, in connection with this station, the greatest railway traffic achievement of its kind that has been yet produced. The Pennsylvania Railroad, by concentrating so much of its passenger and freight traffic at this admirably located station, has found an arrangement of this kind necessary, and the interlocking switch and signal system, as there exhibited, is the result of the diligent labor during many months of the best railway minds of Europe and America. The passenger, as he glides into or out of the station, little realizes the intricate yet admirable system of switches, signals, levers and interlocking bars that are brought into requisition to direct the train aright and secure its swift and safe passage along the Elevated road. It is so constructed as to meet the requirements of the rapidly developing traffic of this great railway, and is, in fact, one of the leading railway curiosities our city has to exhibit."



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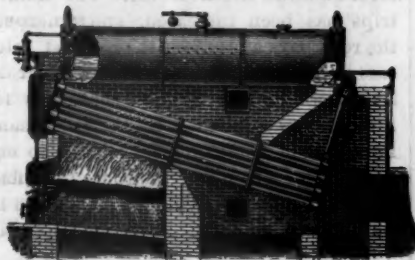
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## Mexican Railroads.

CONTRARY to the generally received opinion that the people of Mexico are contributing but little financially toward the construction of railroads within their own borders, a Mexican paper says that of the twenty-seven lines of railroad now under construction there, thirteen are being built by Mexican capital furnished by Mexican companies organized in Mexico, and then adds:—

"While ready to confess that this spirit of enterprise, this desire to invest our native capital in railroads, is the result of seeing American enterprise and capital coming into our Republic, we claim that it is a notable sign of Mexico's progress, an unequivocal proof of the stability of our Government, and a fact that marks an era in our history. And while we look back upon our past as showing the ordeal through which Mexico has had to pass to regenerate herself from the many evils bequeathed to her by the old Colonial régime, we cannot refrain from here paying our tribute of gratitude to General Porfirio Diaz as the President who gave this new life to the Republic, and to General Gonzalez as the President who has so ably continued the noble work begun by his predecessor and comrade. Mexico is bound to have railroads, and railroads that will pay the shareholders handsome returns, if properly managed in the operation. We would make only one suggestion—and that is, that the companies should employ all the Mexicans they can."

## Tehuantepec Railroad.

MR. EDWARD LEARNED, President of the Tehuantepec Railroad Company, has issued a circular in reference to the recent forfeiture of its charter, in which he says: "This forfeiture has been declared, regardless of the fact that an expenditure of \$50,000 only is required to complete the unfinished section; that at the time of forfeiture there was due from the Government the sum of \$75,000 for subsidy earned on an accepted section; that \$100,000 of the guarantee deposit was held by the Government depository in Mexico. The expenditure for rails, ties and materials delivered, and for work done on other sections of the road, has been vastly in excess of the above estimated \$50,000; that the outfit, supplies, material and work furnished by the company represented expenditures and liabilities of nearly \$3,000,000; that the work, etc., is estimated to be equal to nearly one-third of the cost of the entire road; that the several extensions of time which have been granted by the Government were results of uncontrollable causes (*fuera mayor*) provided for in the grant—hence not acts of favor, but of right. The Government having suffered no damage, the company claims that a forfeiture which imperils millions of foreign capital from a merely technical cause is unjust, illegal and without precedent or parallel where commercial treaties are recognized; that the default now alleged is largely attributable to adverse legislation—in violation of our concession and injurious to our financial negotiations. In case negotiations now pending for an amicable ar-

rangement shall fail, the company is entitled to appeal to the tribunals of Mexico. The bondholders, whose rights are secured by a mortgage which covers all the property of the company—including the location of route—and which has been formally authorized, approved and registered by the Government, may invoke similar or other proper authorities to sustain their rights. If the forfeiture is insisted on and sustained by tribunals, the grant provides that the Government or new grantee 'shall be obliged to take the whole property, making such payment therefor as shall for that purpose be approved by experts appointed by both parties, and in case of disagreement, by a third expert selected by the other two. From the valuation placed upon the road shall be deducted the amount which may have been received by the company as a subsidy, and the balance shall be paid in cash or at a term of twenty-five years with interest at 10 per cent per annum.'"

## The Power of the Penny.

THE importance in which that small coin, the penny, is held by a very large class of pleasure seekers in this community has recently been illustrated by the experiences of the Elevated railway at Coney Island, between Brighton and West Brighton. The road runs parallel with and directly behind the Concourse, the Park road between the same places. Its construction requires that passengers should climb two steep flights of stairs—a not attractive condition on a hot summer day. The wagons which convey passengers over the Concourse are low and very easy of access, and the drive, when the Concourse was kept in order, as it is not now, was a most pleasant one of nearly a mile. The fare both by the Elevated road and the Park wagons over the Concourse was five cents each way, apparently cheap enough. As long as the charges were the same by both lines the wagons did all the business, the road averaging not more than two or three passengers per trip, although the cars would comfortably seat 100 persons. The loss per day was at least \$50 to the Elevated road. But about a week ago some wise head in the railway management reduced the fare to three cents per trip and five cents for excursion tickets, thus reducing the cost one-half and underbidding the Park wagons. The latter did not reduce rates. The consequence has been that the railway has been crowded at every trip in the busy part of the day. There is standing room only to be had as a rule, and many passengers are usually left on the platform to await the next car. The number of trips has been increased, and unexpectedly the road pays a profit at the reduced rate, the cars frequently carrying three and four dollars a trip, where they formerly had only ten or fifteen cents on board. On the other hand the Park wagon companies have had to employ runners at each end of the route to solicit passengers and to decry the railway which has so suddenly developed a damaging opposition.

WHEN the tracks of the Pennsylvania Railroad are straightened near Lancaster this fall, 3,500 feet will be saved in distance and 358 degrees of curvature.

## Imports of Dry Goods at New York.

THE Imports of Foreign Dry Goods at New York for the month of August, were:—

ENTERED FOR CONSUMPTION.			
	1880.	1881.	1882.
Manufs. of wool....	\$3,071,107	\$3,299,191	\$3,501,727
Manufs. of cotton....	2,096,054	2,365,326	2,152,959
Manufs. of silk.....	4,033,289	3,987,171	4,658,739
Manufs. of flax.....	995,888	1,459,694	1,326,232
Miscell. dry goods....	968,679	1,020,631	915,547
Total ent. for consumption.....	\$11,165,617	\$12,132,016	\$12,555,204

WITHDRAWN FROM WAREHOUSE.			
	1880.	1881.	1882.
Manufs. of wool....	\$1,414,586	\$1,276,155	\$1,228,404
Manufs. of cotton....	629,029	467,231	409,849
Manufs. of silk.....	994,025	709,256	888,576
Manufs. of flax.....	550,136	450,115	441,599
Miscell. dry goods....	187,774	210,034	160,843
Total withdrawn from warehouse.....	\$3,766,550	\$3,118,791	\$3,129,271
Add ent. for con.....	11,165,617	12,132,016	12,555,204

Total thrown on the market.....			
	\$14,932,167	\$15,250,807	\$15,684,475

ENTERED FOR WAREHOUSING.			
	1880.	1881.	1882.
Manufs. of wool....	\$1,624,072	\$1,055,504	\$1,295,272
Manufs. of cotton....	402,023	312,281	400,550
Manufs. of silk.....	947,164	501,035	709,054
Manufs. of flax.....	641,838	411,254	423,169
Mis. dry goods.....	397,227	220,485	258,347
Total ent. for warehouse.....	\$4,102,324	\$2,500,558	\$3,086,992
Add entered for consumption.....	11,165,617	12,142,016	12,555,204

Total ent. at port.....			
	\$15,277,941	\$14,632,574	\$15,642,196

THE Imports of Foreign Dry Goods at New York for eight months from January 1, were:—

ENTERED FOR CONSUMPTION.			
	1880.	1881.	1882.
Manufs. of wool....	\$14,716,888	\$12,526,944	\$16,176,739
Manufs. of cotton....	16,652,986	15,485,039	17,485,401
Manufs. of silk.....	21,572,072	19,242,739	25,783,835
Manufs. of flax....	10,000,396	8,375,324	9,812,687
Mis. dry goods....	6,066,750	5,620,427	6,316,888
Total entered for consumption....	\$69,009,092	\$61,257,073	\$75,575,550

WITHDRAWN FROM WAREHOUSE.			
	1880.	1881.	1882.
Manufs. of wool....	\$4,926,896	\$5,787,902	\$5,065,181
Manufs. of cotton....	2,844,078	3,493,090	2,713,076
Manufs. of silk....	3,866,365	3,754,150	4,146,609
Manufs. of flax....	2,964,596	3,671,641	2,871,791
Mis. dry goods....	1,262,728	1,647,482	1,604,778
Total withdrawn from warehouse....	\$15,884,663	\$18,352,265	\$16,349,435
Add entered for consumption....	69,009,092	61,257,073	75,575,550

Total thrown on the market.....			
	\$84,893,755	\$79,609,338	\$91,924,985

ENTERED FOR WAREHOUSING.			
	1880.	1881.	1882.
Manufs. of wool....	\$7,555,688	\$4,486,069	\$5,981,731
Manufs. of cotton....	3,386,556	2,889,531	3,037,010
Manufs. of silk....	4,494,372	3,327,728	4,233,931
Manufs. of flax....	4,599,677	2,911,563	2,875,044
Mis. dry goods....	1,673,098	1,799,047	1,714,399
Total entered for warehouse.....	\$21,679,391	\$15,764,937	\$17,842,615
Add entered for consumption....	69,009,092	61,257,073	75,575,650

Total ent. at port.....			
	\$90,688,483	\$77,022,010	\$93,418,165

In the act of making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1883, is embodied a clause which reads as follows: "That all parties owning, occupying or operating bridges over any navigable river shall maintain at their own expense, from sunset to sunrise, throughout the year, such lights on their bridges as may be required by the Lighthouse Board for the security of navigation; and, in addition thereto, all persons owning, occupying or operating any bridge over any navigable river shall in any event maintain all lights on their bridge that may be necessary for the security of navigation."



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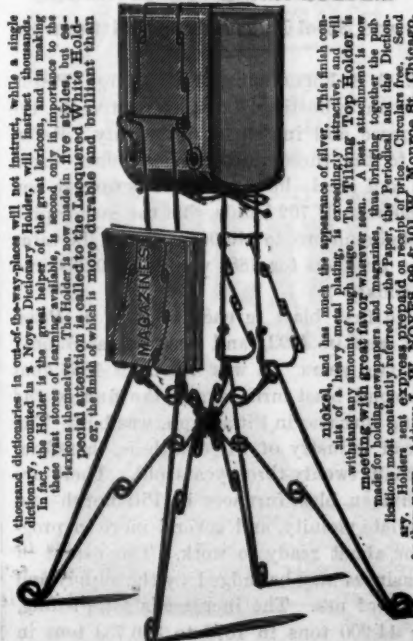
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## Statement of the Public Debt of the United States, September 1, 1882.

DEBT BEARING INTEREST.		
	Amount Outstanding.	Accrued Interest.
6 per cent loan 1863-'81 continued at 3½ per cent funded loan of 1881, continued at 3½ per cent.....	\$32,755,400 00	\$191,073 17
4½ per cent funded loan of 1891.....	491,496,900 00	1,171,032 62
4 per cent funded loan of 1907.....	250,000,000 00	2,812,500 00
4 per cent refunding certificates.....	738,909,350 00	4,926,062 33
3 per cent navy pension fund.....	442,100 00	2,947 33
3 per cent navy pension fund.....	14,000,000 00	70,000 00
Aggregate of debt bearing interest.....	\$1,437,603,750 00	\$9,173,615 45
Interest due and unpaid.....		1,926,080 07
DEBT ON WHICH INTEREST HAS CEASED SINCE MATURITY.		
	Amount Outstanding.	Interest due Outstanding, and unpaid.
4 to 6 per cent. old debt, 1837.....	\$57,665 00	\$64,174 81
5 per cent. Mexican indemnity stock, 1846-'52.....	1,104 91	85 74
6 per cent. bonds, 1847-'67.....	1,250 00	22 00
6 per cent. bounty land scrip, 1847-'49.....	3,275 00	213 06
5 per cent. Texas indemnity stock, 1850-'64.....	20,000 00	2,945 00
5 per cent. bonds, of 1858-'74.....	7,000 00	875 00
5 per cent. bonds, of 1860-'71.....	10,000 00	600 00
6 per cent. 5-20 bonds, 1862, called.....	367,000 00	7,740 41
6 per cent. 5-20 bonds, June 1864, called.....	57,400 00	1,051 87
6 per cent. 5-20 bonds, 1865, called.....	70,550 00	18,521 11
5 per cent. 10-40 bonds, 1864, called.....	326,850 00	65,329 92
6 per cent. Consol. bonds, 1865, called.....	370,200 00	12,198 41
6 per cent. Consol. bonds, 1867, called.....	874,000 00	111,618 71
6 per cent. Consol. bonds, 1868, called.....	263,200 00	21,086 51
6 per cent. loan, Feb. 8, 1861, matured Dec. 31, 1880.....	77,000 00	4,830 00
5 per cent. funded loan 1881, called.....	955,650 00	12,086 64
Oregon War Debt, March 2, 1861, matured July 1, 1881.....	8,100 00	1,579 50
6 per cent loan of July 17 and Aug. 5, 1861, matured June 30, 1881.....	573,550 00	15,184 50
6 per cent loan of July 17 and Aug. 5, 1861, continued at 3½ per cent, matured Dec. 24, 1881, called.....	5,456,800 00	73,462 83
6 per cent. loan of March 3, 1863, matured June 30, 1881.....	164,200 00	5,724 00
6 per cent loan of March 3, 1863, continued at 3½ per cent, matured August 1, 1882, called.....	2,252,450 00	6,442 08
1-10 to 6 per cent. Treasury notes, prior to 1846.....	82,525 35	2,668 06
1-10 to 6 per cent. Treasury notes, 1846.....	5,900 00	200 60
6 per ct. Treasury notes, 1847 to 6 per cent. Treasury notes, 1857.....	950 00	57 00
6 per ct. Treasury notes, 1861.....	1,700 00	99 00
6 per ct. Treasury notes, 1861.....	3,000 00	364 50
7 3-10 per cent. 3 years' Treasury notes, 1861.....	16,300 00	1,104 43
5 per cent. 1 year notes, 1863.....	41,935 00	2,098 85
5 per cent. 2 year notes, 1863.....	32,700 00	1,622 30
6 per ct. compound interest notes, 1863-64.....	219,860 00	44,920 47
7 3-10 per cent. 3 years' Treasury notes, 1864-65.....	138,850 00	20,422 62
6 per cent. certificates of indebtedness, 1862-63.....	4,000 00	253 48
4 to 6 per cent. temporary loan, 1864.....	2,960 00	244 19
3 per cent. certificates, called.....	5,000 00	394 31
Aggregate of debt on which interest has ceased since maturity.....	\$12,472,725 26	\$500,251 91
DEBT BEARING NO INTEREST.		
Demand notes, 1861-62.....	\$59,595 00	
Legal tender notes, 1862-63.....	346,681,016 00	
Certificates of Deposit.....	12,000,000 00	
Coin certificates, 1863.....	4,992,040 00	
Silver certificates, 1878.....	69,440,210 00	
Unclaimed interest.....		5,339 96
Fractional currency, 1862, 1863 and 1864.....	\$15,408,000 77	
Less amount estimated as lost or destroyed, act of June 21, 1879.....	8,375,934 00	
	7,032,066 77	
Aggregate of debt bearing no interest.....	\$440,204,927 77	\$5,339 96

## RECAPITULATION.

	Amount Outstanding.	Interest.
Debt bearing interest in coin, viz:		
Bonds at 6 per cent., continued at 3½ per cent.	\$32,755,400 00	
Bonds at 5 per cent., continued at 3½ per cent.	401,496,900 00	
Bonds at 4½ per cent.....	250,000,000 00	
Bonds at 4 per cent.....	438,909,350 00	
Refunding certificates.....	442,100 00	
Navy pension fund, 3 p.c.	14,000,000 00	
	\$1,437,603,750 00	\$11,099,695 52
Debt on which interest has ceased since maturity.....	12,472,725 26	500,251 91
Debt bearing no int., viz:		
Old demand and legal-tender notes.....	\$346,740,611 00	
Certificates of deposit.....	12,000,000 00	
Coin & silver certificates.....	74,432,250 00	
Fractional currency.....	7,032,066 77	
	\$440,204,927 77	
Unclaimed interest.....		5,339 96
	\$1,890,281,403 03	\$11,605,287 39
Total debt, principal and interest to date, including interest due and unpaid.....	\$1,901,886,690 42	
AMOUNT IN TREASURY.		
Interest due and unpaid.....	\$1,926,080 07	
Debt on which interest has ceased.....	12,472,725 26	
Interest thereon.....	500,251 91	
Gold and silver certificates.....	74,432,250 00	
U. S. notes held for redemption of certificates of deposit.....	12,000,000 00	
Cash balance available Sept. 1, 1882.....	141,629,211 22	
	\$242,060,518 46	
Debt, less am't in Treas'y Sept. 1, 1882.....	\$1,658,826,171 96	
Debt, less am't in Treasury Aug. 1, 1882.....	1,675,054,433 20	
Decrease of debt during the month.....	\$16,128,261 24	
Decrease of debt since June 30, 1882.....	\$29,988,288 76	
BONDS ISSUED TO THE PACIFIC RAILROAD COMPANIES, INTEREST PAYABLE IN LAWFUL MONEY.		
	Amount Outstanding.	Accrued Interest not paid.
Central Pacific bonds, 1862-64.....	\$25,885,120 00	\$25,885 20
Kansas Pacific bonds, 1862-64.....	6,303,000 00	63,030 00
Union Pacific bonds, 1862-64.....	27,236,512 00	272,365 12
Cent. Branch Union Pacific bonds, 1862-64.....	1,600,000 00	16,000 00
West'n Pacific Bonds, 1862-64.....	1,970,560 00	19,705 60
Sioux City & Pacific bonds, 1862-64.....	1,628,320 00	16,283 20
Totals.....	\$64,623,512 00	\$646,235 12
Interest paid by the United States, \$55,344,682.74; interest repaid by transportation of mails, &c., \$15,221,035.61; interest repaid by cash payments: 5 per cent net earnings, \$655,108.87; balance of interest paid by United States, \$39,468,448.26.		
The foregoing is a correct statement of the public debt, as appears from the books and Treasurer's returns in the Department at the close of business, August 31, 1882.		
CHARLES J. FOLGER, Secretary of the Treasury.		

## Iron and Steel Industries of Pittsburgh.

MR. G. S. FOLLANSBEE, of Pittsburgh, Penn., has been collecting statistics relative to the commerce and industries of that city. Referring to the three important branches—iron, glass and steel—he says that they furnish employment to 34,702 hands, that the cash capital invested amounts to \$40,065,000, and the value of the products for 1881 was \$64,220,269, and then adds:—

"The first blast furnace erected in Pittsburgh was in 1792, and was operated only about two years. It was not until 1859 that the second blast furnace, and the first of the existing furnaces in Pittsburgh, was built. The pig iron industry of Pittsburgh is, therefore, less than twenty-three years old. There are now sixteen blast furnaces in Pittsburgh and immediate vicinity, and several more in progress or about ready to work. The extent of the business may be judged by the supply and receipts of ore. The increase is astonishing, being 44,900 tons in 1870 to 346,733 tons in

1880. The ore is brought to Pittsburgh from Marquette and Houghton, Mich., on Lake Superior, Wisconsin, Iron Mountain, Missouri, Canada, the interior counties of Pennsylvania and eastern Virginia, and the northern counties of New Jersey. Much of it comes from Blair, Lawrence and Butler counties, Pa. For four years past a large supply has been imported from Spain and Algiers, via Baltimore and Philadelphia.

"The manufacture of steel in Pittsburgh has increased in volume so rapidly the past quarter of a century that it may almost be considered a new industry. In 1850 there were but thirteen steel works in the whole of Pennsylvania, with an annual product of 6,078 tons, of which six works, with a capacity of 3,278 tons, or nearly half the entire total, were in Pittsburgh. There are now in Allegheny county seventeen steel manufactories, employing 7,060 hands. The value of the product for 1881 was \$18,378,837. The entire capital invested in the industry is \$10,170,000. The amount of product last year was 139,073 tons of steel rails; steel in other forms 72,344 tons. Total, 211,417 tons of steel."

## Orne's Patent Car Axle.

THIS axle, which has recently been patented, is intended to overcome the resistance of car wheels by their circumferential slipping in going around curves of railroads. It is made of few pieces, and it combines strength, simplicity and reasonable cost.

It is composed of the axle—which is made in three sections—it is surrounded by the hub—which is made in two horizontal half-round pieces; when these two halves are together, inclosing the axle, they are pressed by power into the wheel, which is bored correspondingly large to receive it; the end sections are steel, and revolve only with the wheel and hub; the middle section is wrought-iron pipe four inches outside diameter and one inch thick in the walls; the interior of the pipe is used as a reservoir for lubricant, which is fed to inside bearing of wheels; this middle section keeps the wheel to gauge, and a brass washer between middle and end sections takes up any wear at this place. This arrangement allows each wheel to move independently when rounding curves, and when running on a straight line both wheels and axle revolve together, which reduces the wear to a minimum.

A number of comparative tests have been made between axles with independent wheels and the rigid axles and wheels now in general use, to ascertain the difference in draft-power required to pull them; and it has been found that cars on independent wheels require from fifteen to thirty per cent less power to draw them around curves, than cars on rigid axles and wheels. Authentic information about tests can be given.

Drawings will be sent to railroads that may wish to see them.

Very reasonable terms will be made to the first railroad companies that adopt and use this patent. Edward B. Orne, 3935 Locust street, Philadelphia, Pa., is the patentee.

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## Copper and Iron Mining in Michigan.

An interesting and valuable work on the Resources of Michigan has just been compiled by Mr. Frederick Morley, under the auspices of that State, from which we make the following extracts:—

## COPPER MINING.

It is now forty years since Dr. Douglass Houghton, whose name is lastingly and most honorably identified with the history of north-western development, presented to the Legislature his report upon the geology of the upper peninsula, the product of ten years' persistent and thoroughly scientific labor in an unbroken wilderness. It first asserted that the mineral wealth of the southern shore of Lake Superior offered a profitable field to enterprise and capital, and placed on record prophecies as to copper since amply fulfilled. Numerous exploring parties were soon busy on the Mineral Range, and in 1846 the fissure vein of the Cliff mine, near Eagle River, was yielding a remunerative product, the regularity of its dividends for many years proving a source of constant encouragement to struggling enterprises along the peninsula. Two years later the Minnesota commenced work, back of Ontonagon, upon the enormous masses of copper, one of them about five hundred tons in weight, which made it the bonanza mine of the day. Exploration was eventually pushed to Portage Lake, and the district to which it gives its name is now the busiest center of the copper mining interest as well as the most prosperous. The lake forms a spacious and accessible harbor, open by costly waterways to the largest vessels navigating the lakes; upon it lie the flourishing towns of Houghton and Hancock. Both shores of the Keweenaw peninsula are connected by this harbor and its inlets, and supplies for the mines as well as their products find easy transportation through the facilities thus afforded.

## RICHEST COPPER MINE IN THE WORLD.

About 1865 the Calumet conglomerate was discovered twelve miles from Portage Lake, and the annals of mining enterprise contain no parallel to the history of the consolidated company now known as the Calumet and Hecla. With a total assessment for all purposes upon its shareholders of less than \$1,000,000, it has built up a vast industry employing over 2,000 men, supporting two flourishing villages with a population of more than 5,000; has expended a vast amount of money in stamp-mills, machinery, and permanent improvements, and possesses a dividend account which exceeds the magnificent total of \$20,000,000. More than one-third of the entire copper product of the upper peninsula has been taken from its levels. No mine, of any description, has ever returned such large *pro rata* dividends to its shareholders. The great Burra-Burra mine of South Australia did not yield during the twenty-one years of its profitable existence, as much pure copper as was taken from the Calumet and Hecla in 1880 and 1881. It pays quarterly dividends of \$5 per share on 100,000 shares with great regularity, and its stock, the par value of which is \$25, was quoted on February 1, 1882, at \$230. Its total product of refined copper in 1881 was about 16,000 tons, or one-eighth of the

estimated annual production of copper in the world.

## PROFITABLE MINING.

Between the opening of the first mine and the close of 1881 the Lake Superior copper districts produced 330,000 tons of refined copper, representing a value in market of not less than \$150,000,000. The total output of 1881 was about 38,000 tons, taken from 23 mines and valued at \$10,000,000.

## MICHIGAN IRON ORES.

The discovery of the valuable iron ore deposits was not due to the narratives of early travelers nor to geological exploration, but was the unforeseen result of the eager search for copper which followed Dr. Houghton's report of 1841. That paper merely said: "Although hematite ore is abundantly disseminated through all the rocks of the metamorphic group, it does not appear in sufficient quantity at any one point that has been examined to be of practical importance." In 1844 the attention of the United States surveyors who were at work about the present site of the city of Negaunee was drawn by the unusual variations of the needles of their solar compasses to outcroppings of magnetic iron ore. In the next year the agents of a copper mining company which had been formed at Jackson, explored the same region, and, becoming convinced that iron ore of merchantable quality was present in large quantity, secured what is now known as "the Jackson location." The first ore, three hundred pounds, was taken from this mine in 1846, and was smelted in the following winter in an old forge on Cucush prairie. The first iron made upon Lake Superior was in 1848, near Carp River. In 1849 the first opening was made at the location of the Cleveland mine, near Ishpeming, and in 1850 a few tons of ore were taken to New Castle, Pa., and made into bloom and bar iron, the quality proving excellent. In 1852 seventy tons of the Jackson ore were manufactured into pig iron at Sharon, Pa., and the attention of iron masters in Pennsylvania and Ohio was then more generally drawn to this new field of supply.

## THE SAULT STE. MARIE CANAL.

It was in 1852 also that Congress granted to Michigan 750,000 acres of land to aid in the construction of a canal around the rapids of St. Mary's River. This was accepted in the following February, and a contract was promptly executed with an association of eastern capitalists, who pushed on their task with vigor in the face of many obstacles. As a result the State, in 1855, threw open to lake commerce the Sault Ste. Marie Ship Canal, a magnificent enterprise, representing an original outlay of \$1,000,000. It has been of vast benefit in developing the great industries of the upper peninsula. Within the last ten years it has been materially enlarged by the general Government, to which it has been ceded by the State on condition that it shall be kept as a free national highway. With the opening of this canal commenced a new era in the mining history of Lake Superior. It was now possible during the season of navigation to readily reach a base of supplies and a market, and the growth of the country became rapid and constant.

## VIGOROUS MINING.

In 1855 the shipments of ore began, and the unprofitable mine bloomeries were abandoned. In 1858 the first furnace (the Pioneer) commenced operations. In 1860 the entire ore product of the district exceeded 100,000 tons, and by this time all doubts as to the value and permanence of its mining interest had disappeared. New enterprises followed in quick succession, cities and villages sprang up and thrived, a railroad connecting the mines with lake ports, and then with the great northwestern lines, was built, and the work of exploration was vigorously pushed in every direction. Even the prostration of the iron industry of the United States by the panic of 1873 only retarded this development. In the calendar year of 1881 the producing iron mines of the upper peninsula were fifty-six in number and their yield was estimated by the *Marquette Mining Journal* to be 2,321,315 tons of ore. The same authority placed the value of this product when marketed (including rail and lake freights to Cleveland and other distributing points) at \$18,835,000. The value, when placed in market, of the aggregate product of the Lake Superior iron districts between the date of the Jackson discovery and the close of 1881 the *Journal* estimated at \$138,500,000.

The sixty locomotives building at the Baldwin works for the Pennsylvania Railroad Company are to be of the Modoc pattern and finished at the rate of two a week.

A. A. TALMAGE, General Manager of the Missouri Pacific, the Missouri, Kansas and Texas, and the Central Branch of the Missouri Pacific, was recently in this city on business connected with these roads, and during an interview is reported to have said that he had been over them all within the past few weeks. "Our capacity for doing business," he said, "has been largely increased, and we are well prepared to handle without delay or difficulty all the traffic that will come to us. We have added to our rolling-stock within the past two years 4,000 freight cars and about 100 locomotives of the newest and most improved patterns, besides increasing our terminal facilities at St. Louis, Kansas City and other important stations. The new elevator at Carondelet, with a capacity of one and a half millions of bushels, is ready for business and will assist us very much in taking care of grain and permit us to unload and return cars more rapidly. Steel rails have been laid and improvements made as rapidly as possible. On the Missouri, Kansas and Texas one hundred miles of steel rails were laid last year, and eighty have been already put down this year. All extensions in Texas have been laid with steel rails and built in the best possible manner. Little is left to be desired as to the material condition of our roads, and the Missouri Pacific is the best equipped line west of the Mississippi River. As to the barge line down the Mississippi, you can say that it will do a heavy business this season and will help us in moving our freight, since it furnishes the cheapest and best outlet for grain west of the river. There are about 100 barges and twelve towboats."